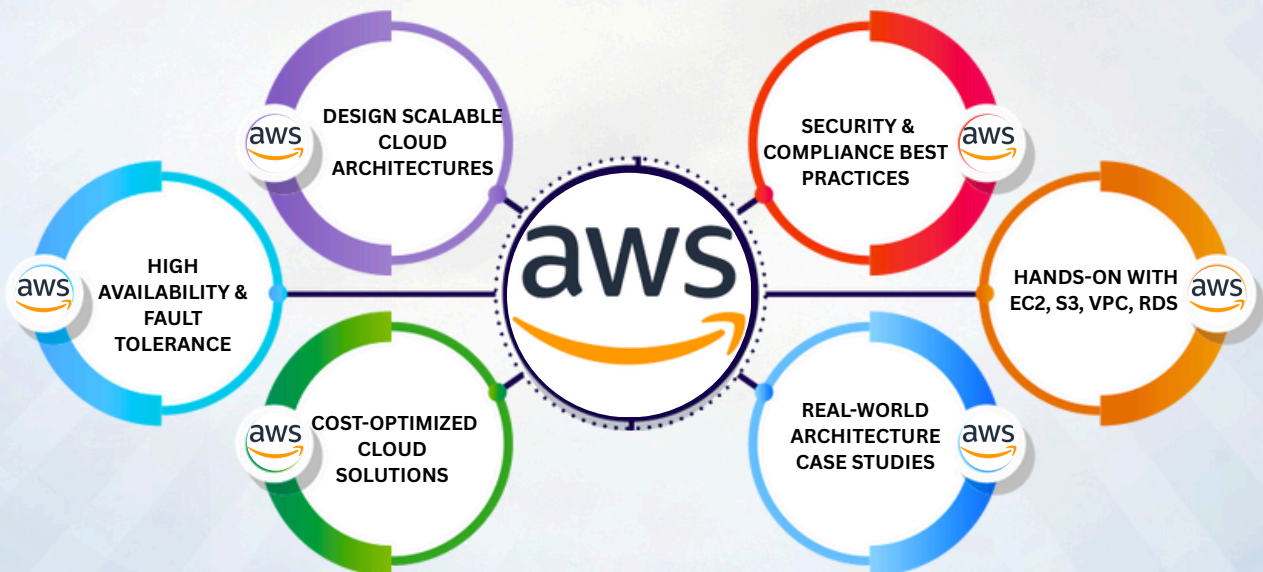




AWS CLOUD SOLUTION ARCHITECT





AWS SOLUTION ARCHITECT SYLLABUS

INTRODUCTION TO CLOUD COMPUTING

- WHAT IS CLOUD?
- CLOUD SERVICE MODELS:
 - IAAS (INFRASTRUCTURE AS A SERVICE)
 - PAAS (PLATFORM AS A SERVICE)
 - SAAS (SOFTWARE AS A SERVICE)
- CLOUD DEPLOYMENT MODELS:
 - PRIVATE CLOUD
 - PUBLIC CLOUD
 - HYBRID CLOUD

INTRODUCTION TO AMAZON WEB SERVICE

- WHAT IS AWS?
- AWS GLOBAL INFRASTRUCTURE & COMPONENTS
- REGIONS, AVAILABILITY ZONES AND ENDPOINTS
- HOW TO SUBSCRIBE FOR AWS ACCOUNT
- WHAT ARE THE AWS FREE TIER LIMITS AND USAGE?
- PILLARS OF THE AWS WELL-ARCHITECTED FRAMEWORK
- AWS CERTIFICATION PATHS
- NAVIGATE AWS CONSOLE
- LIST OF SERVICES GIVEN BY AWS

AMAZON EC2

- WHAT IS EC2?
- INSTANCE TYPES
- INSTANCE LIFECYCLE □ SECURITY GROUPS
- IP ADDRESSING
- ASSIGNING ELASTIC IP □ SECURITY FROM KEY PAIRS
- PRICING MODEL IN EC2 INSTANCES
- UNDERSTANDING RESERVED INSTANCES
- BUILDING LINUX AND WINDOWS INSTANCES
- CONNECTING INSTANCES FROM DIFFERENT PLATFORMS
- NETWORK INTERFACES
- EIP
- EC2 TROUBLESHOOTING SCENARIOS

AMAZON MACHINE IMAGES (AMI)

- WHAT IS AMI?
- MANAGING AMI'S
- WORKING WITH LINUX AND WINDOWS AMI'S
- SHARED AND PAID AMI'S
- WEB SERVER CONFIGURATION
- CREATING OWN AMI'S
- MAKING AN AMI PUBLIC
- AMI MARKET PLACE
- WHAT IS VIRTUALIZATION?



AWS COMMAND LINE (AWS CLI)

- INTRODUCTION TO AWS CLI?
- USEFUL FEATURES IN AWS CLI
- PREREQUISITES FOR CLI
- INSTALLING AWS CLI ON WINDOWS AND LINUX
- GENERATING ACCESS KEYS AND SECRET KEY
- CONFIGURING AWS CLI
- RUNNING COMMANDS

IDENTITY ACCESS MANAGEMENT (IAM)

- IAM INITIAL SETUP AND CONFIGURATION
- WHAT IS A POLICY?
- POLICIES CREATION
- IAM ROLES
- IAM GROUPS AND POLICIES
- USER AND GROUP SETTINGS
- WHAT IS MFA
- HOW TO CONFIGURE MFA
- CROSS ACCOUNT ACCESS

CLOUD TRAIL

- WHAT IS CLOUD TRAIL
- TRACKING USER ACTIVITY
- BENEFITS □ TRAILS

AMAZON SQS

- WHAT IS SQS?
- SQS BENEFITS
- TYPES OF MESSAGES
- STANDARD VS FIFO

SIMPLE NOTIFICATION SERVICE (SNS)

- WHAT IS SNS?
- SNS TOPICS
- SUBSCRIPTIONS
- SUBSCRIBING TOPIC VIA EMAIL
- SETTING NOTIFICATION FOR EC2 INSTANCE CHANGES

CLOUD WATCH

- INTRODUCING CLOUD WATCH
- DASHBOARDS
- CLOUD WATCH ARCHITECTURE
- MONITORING THE AWS SERVICE HEALTH
- DASHBOARD
- MONITORING THE CLOUD WATCH
- GETTING STATISTICS FOR A SPECIFIC EC2
- INSTANCE
- SETTING UP NOTIFICATIONS

NETWORKING BASICS

- WHAT IS NETWORK?
- NETWORK TOPOLOGIES
- OSI REFERENCE MODELS
- IPADDRESSES AND CLASSES
- DIFFERENCE BETWEEN PRIVATE AND PUBLIC
- IPADDRESS
- DESCRIPTION OF SUBNET, GATEWAY, ROUTER...ETC
- DIFFERENT NETWORKING COMPONENTS
- ROUTER, GATEWAY
- SUBNETS, CIDR

VIRTUAL PRIVATE CLOUD (VPC)

- WHAT IS AMAZON VPC?
- VPC ESSENTIALS
- DEFAULT AND NON-DEFAULT VPC
- VPC NETWORKING AND ACL
- SECURITY GROUPS
- ROUTE TABLES PUBLIC AND PRIVATE
- DNS AND DHCP OPTIONS SET
- VPC PEERING AND END POINTS
- SUBNETS
- SUBNET ROUTING
- VPC INTERNET GATEWAY
- ELASTIC IP ADDRESSES AND NETWORK
- INTERFACES
- EXTENDING ON-PREMISE NETWORKS WITH
- VPC
- VPC INTEGRATION WITH OTHER SERVICES
- CREATING NAT INSTANCE
- CONFIGURING WEB APPLICATION IN VPC
- TROUBLE SHOOTING SCENARIOS
- NETWORK MONITORING WITH FLOW LOGS
- ENDPOINTS
- DNS HOSTNAMES
- VPC PEERING

NETWORK & SECURITY

- SECURITY GROUPS
- ACLS
- ELASTIC IPS
- PLACEMENT GROUPS
- KEY PAIRS
- NETWORK INTERFACES
- SECURE VPN CONNECTION
- SITE TO SITE VPN CONNECTION
- TUNNELING
- TRANSIT GATEWAYS
- TRAFFIC MIRRORING
- VPC TROUBLE SHOOTING

AMAZON ROUTE 53

- WHAT IS DNS?
- WHAT IS HOSTED ZONE AND RECORD SETS
- ROUTE53 AS YOUR DNS SERVICE
- ROUTE53 BASICS
- DOMAIN REGISTRATION
- ELB ADDRESS RECORD
- DIFFERENT TYPES OF ROUTING POLICIES
- ROUTE53 AND DNS FAILOVER FOR S3
- BUCKET
- HEALTH CHECKS



EC2 INSTANCE STORE & EBS

- WHAT IS INSTANCE STORE?
- HOW TO LAUNCH INSTANCE WITH INSTANCE
- STORE VOLUME
- WHAT IS EBS?
- EBS PERFORMANCE
- DIFFERENCE BETWEEN INSTANCE STORE AND
- EBS
- FEATURES OF AMAZON EBS
- AMAZON EBS VOLUMES
- EBS EPHEMERAL
- MANAGING EBS VOLUMES
- CREATING AND DELETING EBS VOLUMES
- ATTACHING AND DETACHING EBS VOLUMES
- INCREASING EBS VOLUMES
- AMAZON EBS SNAPSHOTS
- AUTOMATIC SNAPSHOTS
- EBS LIFECYCLE
- LIFECYCLE MANAGER

SIMPLE STORAGE SERVICE (S3)

- WHAT IS OBJECT STORAGE?
- WHAT IS BUCKET?
- STORAGE CLASSES
- CREATING AND DELETING BUCKETS

- GETTING AN OBJECT
- STATIC WEBSITE HOSTING WITH S3
- USES OF S3 STORAGE
- S3 IAM AND BUCKET POLICIES
- WORKING WITH PERMISSIONS OF S3
- OBJECT VERSIONING
- OBJECT LIFECYCLE
- BUCKET CROSS REGION

GLACIER STORAGE

- INTRODUCTION TO GLACIER
- WHAT ARE VAULTS
- CREATING A GLACIER VAULT
- STORING ARCHIVES IN VAULTS

AMAZON EFS

- WHAT IS ELASTIC FILE SYSTEM?
- WHAT IS NFS?
- HOW TO CONFIGURE IN DIFFERENT AZ'S
- MOUNTING AMAZON EC2 INSTANCES
- DIFFERENCE BETWEEN EBS AND EFS
- UNDERSTANDING BLOCK STORAGE AND
- OBJECT STORAGE
- UNDERSTANDING FILE STORAGE AND BLOCK
- STORAGE



SNOWBALL, SNOWBALL EDGE, SNOW MOBILE

- DATA MIGRATION & TRANSFER
- WHAT IS SNOWBALL
- HOW DEVICE DIFFERENCE
- USE CASES
- BENEFITS
- USE CASE DIFFERENCES
- STORAGE CAPACITY

RELATIONAL DATABASE SERVICE (RDS)

- WHAT IS RDS?
- WORKING WITH THE RDS
- DEPLOYING DATABASE ENGINE
- RDS SECURITY GROUPS AND CONNECTING TO
- RDS FROM EC2
- SUBNET GROUPS
- GROUP PARAMETERS
- MYSQL, POSTGRESQL, AURORA AND MARIA
- DB ON RDS
- MULTI AZ'S
- RDS BACKUPS
- SNAPSHOTS
- READ REPLICAS

AMAZON DYNAMO DB

- WHAT IS NOSQL?
- CREATING TABLES
- VIEWS
- GETTING STARTED WITH DYNAMO DB

- LOCAL AND GLOBAL SECONDARY INDEXES
- DYNAMO DB OVERVIEW AND LIMITS
- PROVISIONED THROUGHPUT
- BACKUPS

AMAZON ELASTIC CACHE

- AMAZON ELASTIC CACHE
- OVERVIEW
- TYPES OF CACHES
- TYPES OF NODES
- MEM CACHE
- REDIS

ELASTIC LOAD BALANCING (ELB)

- WHAT IS ELB?
- CREATING A LOAD BALANCER
- LOAD BALANCER TYPES
- WHAT IS CLASSIC AND APPLICATION ELB
- NETWORK LOAD BALANCER
- INTERNAL AND EXTERNAL LOAD BALANCER
- LOAD BALANCING PROTOCOLS
- HEALTH CHECK FOR THE LOAD BALANCER
- ADDING MULTIPLE INSTANCES TO THE LOAD
- BALANCER
- ELB WITH SCALING
- CROSS ZONE LOAD BALANCING



AUTO SCALING

- WHAT IS AUTO SCALING?
- AUTO SCALING COMPONENTS
- CLOUDWATCH METRICS
- BENEFITS OF AUTO SCALING
- AUTO SCALING USE CASES
- CREATION OF LAUNCH CONFIGURATION

LIGHTSAIL

- WHAT IS LIGHTSAIL?
- MANAGE INSTANCES
- VIRTUAL PRIVATE SERVERS WITH LIGHTSAIL
- DEPLOYING LAMP STACK
- DEPLOYING OTHER APPLICATIONS
- CONNECTING INSTANCES

LAMBDA

- WHAT IS A SERVERLESS?
- WHAT IS LABMDA?
- SERVERLESS IN AWS
- TRADITIONAL VS SERVERLESS
- WHICH SERVICES DO WE NEED?
- CREATE FUNCTION
- WHAT LAMBDA SUPPORTED LANGUAGES

AMAZON CLOUD FORMATION

- WHAT IS CODE AS SERVICE
- CLOUDFORMATION COMPONENTS
- CLOUD FORMATION ESSENTIALS
- BUILDING AWS INFRASTRUCTURE AS A CODE

- BUILDING AN S3 BUCKET WITH CLOUD FORMATION
- DEPLOYING AWS RESOURCES
- DEPLOYING A WEBSITE S3 BUCKET
- CONFIGURATION
- DEPLOYING VPC

ELASTIC BEANSTALK

- ELASTIC BEANSTALK ESSENTIALS
- GETTING STARTED WITH EB.
- DEPLOY, MANAGE, SCALE AN APPLICATION
- WORK FLOW OF ELASTIC BEAN STALK
- COMPONENTS AND USAGE
- CREATE APPLICATION
- LAUNCH ENVIRONMENT
- MANAGE ENVIRONMENT
- CREATING APPLICATION SOURCE BUNDLE

SYSTEMS MANAGER

- WHAT IS SYSTEMS MANAGER
- RESOURCE GROUPS
- AUTOMATION
- MANAGED INSTANCES
- STATE MANAGER
- PATCH MANAGER
- SESSION MANAGER

RESUME PREPARATION ROLES & RESPONSIBILITIES

COURSES OFFERING



**JAVA
FULLSTACK**



**PYTHON
FULLSTACK**



**UI
FULL STACK**



LINUX



**CLOUD
COMPUTING**



**DEVOPS
WITH AWS**



DSA



**SYSTEM
DESIGN**



**SOFTWARE
TESTING**



**CYBER
SECURITY**



**DATA
SCIENCE**



**DATA
ANALYTICS**

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