



AMAZON WEB SERVICES

NETWORK NUTS

A-184, II Floor,
Bhishma Pitamah Marg,
Kotla Mubarakpur, New Delhi - 110003

www.networknuts-web.biz

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SOLUTIONS ARCHITECT: ASSOCIATE

Module #1 - Introduction To Cloud Computing

- What is Amazon AWS, AWS Pre Requisites, Strategy of Success.
- AWS Certification Tracks.
- What is Cloud Computing, Cloud Computing Models
- (IAAS, PAAS, SAAS).
- Types of Clouds. (Private, Public, Hybrid)
- Understanding AWS Global infrastructure. Regions, Availability
- Zones.
- AWS Edge Locations, Edge Cache. How to Select a best Region.
- Sign-UP for AWS Services. A visit to AWS Control Panel.
- AWS Services and Terminologies.
- AWS Free Tier, Launch Your first EC2 instance. Windows OS
- AWS Free Tier, Launch Your first EC2 instance. Linux OS.
- About AWS Free Tier Resources after Sign up for 12-Months.

Module #2 - Setup Virtual Data Center in Cloud

- Discussion for how to build data center in AWS.
- Virtual Private Cloud (Concept in-depth)
- Virtual Private Cloud (Use Cases)
- Virtual Private Cloud (EC2-Classic, EC2-VPC)
- Nat-gateway and internet gateway.
- Public subnet & private subnet.
- Route table & manage the routing table.

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Module #3 - Security and IP Address

- Security Group Basics.
- Default Security Group for Your VPC.
- Security Group Rules.
- Differences between security groups for EC2-Classic & EC2-VPC
- Working with Security Groups.
- Access Control List (ACL's) in VPC.
- Working with ACL.
- Elastic Network Interface ENI & types of IP Addresses in AWS

Module #4 - Virtual Private Network

- AWS Bastion Host.
- VPC Endpoint for S3, S3 Private access.
- Working with VPC Peering.
- AWS Virtual Private Gateway (VPG).
- Site to Site VPN- (Connect VPC with on-Premise Network over VPN)

Module #5 - Block Storage

- AWS Cloud Storage Services. Understanding EBS
- EBS Working with Windows OS.
- EBS Working with Linux OS.
- Understanding EFS (Elastic File System).
- EFS configuration with Linux EC2 instance.
- EBS Volume Types.
- Ephemeral Storage, EBS Backed vs Instance Store Backed EC2 instance (Temporary Storage).

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Module #6 - AWS Object Storage

- Understanding Simple Storage Service (S3)
- Managing, Configuring S3 Bucket, Accessing S3 Service.
- Hosting and accessing a Static Web Site on S3.
- Web Site Redirection Using S3 Bucket.
- S3 Bucket, Object Versioning.
- S3 Events, Storage Class, Objects Life Cycle.
- AWS Glacier Storage Service. Archive Data.
- AWS S3 to Glacier Transition, Retrieve Data From Glacier to S3 and Glacier Vault.
- Reduce Redundancy Storage Class.
- TAG S3 bucket. Requester Pay. Transfer Acceleration.
- Cross Region Replication. S3 Pricing factors.

Module #7 - Virtual Machine Type

- EC2 instance Families and Types.
- Calculating EC2 instance Pricing. Pricing Models. On Demand , Reserved, Spot instance.
- EC2 Tenancy Models, Shared instance, Dedicated Instance, Dedicated Host.
- Change EC2 instance Type. (Upgrade/Downgrade)- Resize
- EC2 EBS Backed Instance
- EC2 EBS Volume Backup, Snapshot.
- EBS snapshots (incremental) working. Snapshot deletion. Working with EBS Snapshot (LAB). EC2 instance Full Backup.

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Module #8 - Identity and Access Management

- IAM Role.
- How to configure AWS CLI windows os & linux os.
- Manage all aws service by CLI Configuration.

Module #9 - Load Balancer

- Elastic Load Balancing.(ELB).
- Configuring Elastic Load balancer.
- Route Traffic to a particular Target Group Using Application ELB.
- SSL Certificate use with ELB.
- Connection Draining.
- Sticky Sessions.
- How to manage ELB Logs.

Module #10 - Route 53 Functions, and Working

- Route 53 Weighted Routing Policy.
- Route 53 Latency Routing Policy (LBR).
- Route 53 Failover Routing Policy.
- Route 53 Geolocation Routing Policy.
- Route 53 CNAME vs Alias Record.

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Module #11 - AWS Database Service

- RDS DB Instance, DB Security, DB instance Class.DB Instance Storage.
- Dynamodb, Redshift and Elastic Cache
- Provisioning an RDS Instance. Mariadb and connect over internet.
- RDS Multi AZ deployment, Read Replicas, Backup & Restore. DB Instance Modification.
- AWS SMTP Service Email Relay- Simple Email Service (SES).
- Email Services- AWS Work Mail. (Host custom domain mailing services on AWS)

Module #12 - CND,Devops and AWS Exam

- Cloud Front distribution.
- Elastic Beanstalk.
- AWS Lambda Function.
- How to prepare interview question.
- How to Prepare for a Exam/Certification.

Module #13 - Difference Between Other Cloud Provider

- Design live scenario project based on AWS 2019.
- Microsoft Azure vs GCP Google Cloud vs IBM Cloud.
- What is role of programming language in cloud, like Python