**TNGS Learning Solutions – AWS SA Course Curriculum**

1. Section 1:Introduction - AWS Solutions Architect Associate
   1. Lecture 1:Welcome and Course Introduction
   2. Lecture 2:About your Instructor
   3. Lecture 3:What is AWS
2. Section 2:Cloud Computing Models
   1. Lecture 3:Platform as a Service (PaaS)
   2. Lecture 4:Infrastructure as a Service (IaaS)
   3. Lecture 5:Software as a Service (SaaS)
3. Section 3:Types of Cloud Computing
   1. Lecture 6:Compute Services
   2. Lecture 7:Database Services
   3. Lecture 8:Storage Services
   4. Lecture 9:Virtualization
4. Section 4:Introduction to Cloud Computing
   1. Lecture 10:Hybrid Cloud
   2. Lecture 11:Public Cloud
   3. Lecture 12:Private Cloud
   4. Lecture 13:Virtualization
5. Section 5:The pillars of the AWS Well-Architected Framework
   1. Lecture 14:Operational Excellence
   2. Lecture 15:Cost-optimization
   3. Lecture 16:Performance Efficiency
   4. Lecture 17:Security
   5. Lecture 18:Reliability
   6. Lecture 19:Sustainability
6. Section 6:AWS SignUp
   1. Lecture 20:Signing up for AWS
   2. Lecture 21:AWS Free usage tier
   3. Lecture 22:Create a Billing Alarm
7. Section 7:Introduction to AWS (Amazon Web Services)
   1. Lecture 23:Introduction AWS management console
   2. Lecture 24:Regions and Availability Zones
8. Section 8:Elastic Compute (EC2) Compute Service Fondermentals
   1. Lecture 25:SpinUp a Windows Server
   2. Lecture 26:SpinUp a Linux Server
   3. Lecture 27:Keypair
   4. Lecture 28:Amazon Machine Image (AMI)
   5. Lecture 29:Instance Type
   6. Lecture 30:Elastic IP
   7. Lecture 31:Tags
   8. Lecture 32:Security Groups
   9. Lecture 33:Elastic Block Storage (EBS)
   10. Lecture 34:EBS Snapshots
   11. Lecture 35:Download Putty for Windows
   12. Lecture 36:Download Mobaxterm for Windows
   13. Lecture 37:How to SSH using Putty
   14. Lecture 38:How to SSH using Mobaxterm
   15. Lecture 39:How to SSH on MacOS
   16. Lecture 40:Bootstrapping a Server
   17. Lecture 41:Automate Snapshots Backup
   18. Lecture 42:Automate AMI Backup
   19. Lecture 43:Launch a Wordpress Server
9. Section 9:Identity and Access Management (IAM)
   1. Lecture 44:Introduction to the IAM Dashboard
   2. Lecture 45:How to create an IAM Group
   3. Lecture 46:How to create an IAM user
   4. Lecture 47:How to Add an IAM user to an IAM Group
   5. Lecture 48:How to grant permission to IAM User
   6. Lecture 49:How to grant permission to IAM Group
   7. Lecture 50:How to create an in-line policy for an IAM user
   8. Lecture 51:How to create an in-line policy for an IAM Group
   9. Lecture 52:Understand IAM Json Policy
   10. Lecture 53:Enable MFA for IAM user
   11. Lecture 54:Configure IAM password policy for AWS Account
   12. Lecture 55:Create IAM Role and Assign to EC2 Instance
   13. Lecture 56:Install AWS CLI on Windows
   14. Lecture 57:Install AWS CLI on MacOS
10. Section 10:Auto Scaling
    1. Lecture 58:Introduction to Auto Scaling
    2. Lecture 59:How to Launch an instance inside an ASG
    3. Lecture 60:How to Create a Launch Template
    4. Lecture 61:How to create a Launch configuration
    5. Lecture 62:How to Add and existing server inside a new ASG
    6. Lecture 63:How to Add and existing server inside an existing ASG
    7. Lecture 64:How to configure ASG
    8. Lecture 65:Exploring the properties of Auto Scaling Group
    9. Lecture 66:Setting up an Auto-Scaled, Load-Balanced Application using Autoscaling
    10. Lecture 67:Deleting ASG Resources
11. Section 11:Virtual Private Cloud (VPC)
    1. Lecture 68:Introduction to VPC Dashboard
    2. Lecture 69:IPv4 Vs IPv6 Addressing Scheme
    3. Lecture 70:What is the difference between Public and Private IP’s
    4. Lecture 71:How to create a VPC
    5. Lecture 72:How to create a subnet
    6. Lecture 73:How to create a Internet Gateway
    7. Lecture 74:How to create a NAT gateway
    8. Lecture 75:How to create a Route Table
    9. Lecture 76:How to create a VPC Flow logs
    10. Lecture 77:How to configure a standard VPC Network for a 3 tier application
12. Section 12:Networking - VPC Peering
    1. Lecture 78:How to create a VPC Peering between 2 VPC
13. Section 13:Elastic Load Balancers
    1. Lecture 79:Introduction to ELBs
    2. Lecture 80:Created Load Balancer Security Group
    3. Lecture 81:How to create and configure a Network Load Balancer (NLB)
    4. Lecture 82:How to create and configure a Application Load Balancer (ALB)
    5. Lecture 83:How to create and configure a Classic Load Balancer
    6. Lecture 84:How to configure ALB and ASG
14. Section 14:Relational Database Service (RDS)
    1. Lecture 85:Introduction to RDS
    2. Lecture 86:How to create a RDS Database Subnet Group
    3. Lecture 87:Create DB Security Group
    4. Lecture 88:How to create a MySQL database in RDS
    5. Lecture 89:RDS Snapshot
    6. Lecture 90:RDS Multi-AZ and Read Replica
15. Section 15:Cloudwatch
    1. Lecture 91:Introduction to Cloudwatch
    2. Lecture 92:Custom Dashboards
    3. Lecture 93:Cloudwatch Alarm
    4. Lecture 94:Cloudwatch Logs
    5. Lecture 95:Cloudwatch Metrics
    6. Lecture 96:Cloudwatch Events
16. Section 16:Cloudtrail
    1. Lecture 97:Introduction to Cloudtrail
    2. Lecture 98:Cloudtrail Event History
    3. Lecture 99:How to create a Trail
17. Section 17:Storage - Simple Storage Service (S3)
    1. Lecture 100:Introduction to S3
    2. Lecture 101:How to create an S3 bucket
    3. Lecture 102:Upload files to s3 bucket through web user interface
    4. Lecture 103:How to Enable Bucket Versioning
    5. Lecture 104:S3 Static Website
    6. Lecture 105:Manage S3 Bukcet Permission
    7. Lecture 106:Enable Bukcet Encryption
    8. Lecture 107:Upload files to s3 using command line
    9. Lecture 108:Uplaod files from s3 bucket to EC2 Instance
18. Section 18:Storage - Elastic File Service (EFS)
    1. Lecture 109:Introduction to EFS
    2. Lecture 110:How to create and mount EFS on EC2 Instance
19. Section 19:Platform As A Service (PaaS) - Elastic Beanstalk
    1. Lecture 111:Introduction to EB
    2. Lecture 112:How to create a Sample Web Application in EB
    3. Lecture 113:How to create a custom Elastic beanstalk Environment
    4. Lecture 114:Manage chanages within an existing Elastic Beanstalk Environment
    5. Lecture 115:How to save Elastic Beanstalk Environment Configuration
    6. Lecture 116:Terminate Resources
20. Section 20:Simple Notification Service (SNS)
    1. Lecture 117:Introduction to SNS
    2. Lecture 118:Creating topics and Evaluating ARNs
    3. Lecture 119:Subscribing using Email Protocols
    4. Lecture 120:Publishing Notifications using SNS
    5. Lecture 121:Integrating SNS Topics with CloudWatch and Autoscaling Services
21. Section 21:CloudFront - Content Delivery Network (CDN)
    1. Lecture 122:Introduction to Content Delivery Network (CDNs).
    2. Lecture 123:Understanding AWS EDGE Network Locations
    3. Lecture 124:Understanding CloudFront Distributions and Origins
    4. Lecture 125:Implementing CDN for S3 Static Websites using CloudFront
    5. Lecture 126:Going through CloudFront Reports and Analytics
    6. Lecture 127:CloudFront Security for S3 buckets using OAI (Origin Access Identity).
    7. Lecture 128:Configuring origins and behaviors
    8. Lecture 129:Deleting CloudFront Resources
22. Section 22:CloudFormation (IaaC)
    1. Lecture 130:Introduction to CloudFormation
    2. Lecture 131:Understanding Stacks
    3. Lecture 132:Automating a Ruby on Rails Application using CloudFormation
23. Section 23:AWS S3 Glacier
    1. Lecture 133:Introduction to Glacier Storage
    2. Lecture 134:Creating Vaults
    3. Lecture 135:Download and Install FastGlacier
    4. Lecture 136:Uploading data to Vaults
24. Section 24:Trusted Advisor
    1. Lecture 137:Introduction to Trusted Advisor
    2. Lecture 138:Understanding Cost Optimization Tab
    3. Lecture 139:Understanding Performance Tab
    4. Lecture 140:Understanding Security Tab
    5. Lecture 141:Understanding Fault Tolerance Tab
    6. Lecture 142:Understanding Service Limits Tab
25. Section 25:NoSQL Database - Dynamo DB
    1. Lecture 143:Understanding NOSQL Databases
    2. Lecture 144:Creating a DynamoDB table with Sample Data
    3. Lecture 145:Understanding RCU and WCU of DynamoDB Tables
    4. Lecture 146:Understanding Throttling in DynamoDB
    5. Lecture 147:Creating Alarms in DynamoDB
26. Section 26:3 Tier Application Architecture
    1. Lecture 148:Designing and Implementing a 3 Tier Application in AWS
    2. Lecture 149:Deleting Resources.
27. Section 27:DNS - Route53
    1. Lecture 150:Introduction of Domain Name System
    2. Lecture 151:Buying Domain names at Domain Registrars
    3. Lecture 152:Creating Zones on Route53
    4. Lecture 153:Creating Route53 Records (Address, CNAME, Alias)
    5. Lecture 154:Creating Health Check in Route53
    6. Lecture 155:Understanding routing policies provided by AWS