



KALPRA ACADEMY
FOR SKILL DEVELOPMENT

aws

**JOB-ORIENTED
3-MONTHS
ONLINE COURSE**

**COURSE FEE:
\$499**

Data Engineer

AWS DATA ENGINEER TRAINING COURSE CONTENT

+1 281-801-0921 www.kalpracademy.com Registration@kalpracademy.com

13111 Westheimer Rd., Suite 311, Houston, TX, 77077

INTRODUCTION TO CLOUD COMPUTING

- Introduction to Cloud Computing
- Introduction to AWS
- Create free AWS trial Account
- Creating Billing Alerts
- Brief introduction to AWS services

IAM (IDENTITY ACCESS MANAGEMENT)

- Overview of IAM service
- Root account vs IAM user
- MFA (Multi-Factor Authentication)
- IAM Users
- IAM Groups
- IAM Roles
- AWS managed Policies
- Creating Customer Managed Policies.

S3 (SIMPLE STORAGE SERVICE)

- Overview of S3 service
- Create bucket
- S3 Storage classes
- Data versioning
- Data Security & Encryption
- S3 Bucket level policies
- Static website hosting
- Cross-region replication
- Cross-account S3 access

EC2 BASICS

- Overview of EC2 service
- EC2 Instance Types
- Launch your first EC2 Instance
- Key-pair for EC2 instances
- Connect to EC2 instance
- Basic commands overview on EC2 instance

VPC (VIRTUAL PRIVATE CLOUD) AWS NETWORKING

- Overview of VPC service (AWS Networking)
- CIDR Range
- Subnets
- Route Tables
- Internet Gateway
- Network ACL
- Security groups

LAMBDA

- Overview of Lambda service
- Create your first Lambda function
- Configuration of Lambda function
- Create a test event
- Test your Lambda function
- Schedule a Lambda function with EventBridge rules
- Add event based trigger to a Lambda function

ELB (ELASTIC LOAD BALANCING)

- Overview of ELB service
- Type of Load Balancers
- ALB : Application Load Balancer
- NLB : Network Load Balancer
- Load Balancers Health Checks
- Target groups
- EC2 launch Templates
- ASG : Auto Scaling Groups
- Auto Scaling Policies

ROUTE 53

- Overview of Route53 service
- Hosted zones
- DNS Records
- Routing Policies
- Simple Routing Policy
- Geolocation Routing Policy
- Latency Routing Policy
- Weighted Routing Policy
- Failover Routing Policy



DATABASES

- Crawlers
- Glue Data Catalog
- Athena
- Redshift
- Traditional databases vs AWS databases
- Overview to RDS service
- Launching a RDS Instances (MySQL)
- Multi-AZ for RDS instances
- RDS Read Replicas
- Overview of DynamoDB
- Create table in DynamoDB
- Read consistency
- Read/write capacity
- Elastic Cache
- DMS : Database Migration Service

SECURITY OPTIONS

- CloudWatch
- CloudTrail
- Secret Manager
- KMS : Key Management Services

APPLICATION SERVICES

- SNS : Simple Notification Service
- SES : Simple Email Service
- SQS : Simple Queue Service
- ACM : AWS Certificate Manager

INFRASTRUCTURE MANAGEMENT

- Cloud Formation
- Create/manage AWS resources with Stacks

CICD (CONTINUOUS INTEGRATION & CONTINUOUS DEPLOYMENT)

- Overview of CICD
- Introduction to GIT
- GIT commands
- Code Commit
- Code Build
- Code Deploy
- Code Pipeline

PYTHON BASICS

- Setting up Cloud 9 environment
- Write your first Python Code
- Data types & variables
- Functions in Python
- Conditional & logical operators
- For/while loop
- One/two dimensional array
- Dictionary

PYSPARK BASICS

- Introduction to PySpark
- Installation of PySpark on EC2/Cloud 9
- Creating DataFrame from local file
- Creating DataFrame from S3 file
- Processing data with PySpark
- Select/Filter using DataFrame

PYSPARK ADVANCED

- Joins using DataFrame
- Grouping using DataFrame
- Aggregate functions using DataFrame
- Window functions using DataFrame
- Overview of Spark SQL
- Writing output data into local file
- Writing output data into S3 file



- Overview of the Data Lake
- Hydrating the Data Lake
- Working Within the Data Lake
- Querying and Visualizing the Data Lake
- Consuming the Data Lake - Reporting, Analytics, and Machine Learning
- Automate Data Lake with AWS Lake Formation
- Analytics Lens in the AWS Well-Architected Framework
- AWS Lake Formation
- Consuming Data for Machine Learning with Athena and SageMaker
- Data cleaning and normalization with Glue DataBrew
- Data querying best practice for Athena
- Exploring Data Lake with Athena and Quicksight
- Hydrating the Data Lake with DMS
- Hydrating the Data Lake with Kinesis
- Streaming ETL with Glue
- Transforming Data in the Data Lake with Glue

MEET YOUR INSTRUCTORS

TRAINER NAME: **NEERAJ** TIME: 6 WEEKS

TRAINER NAME: **SURESH** TIME: 1 WEEK

TRAINER NAME: **KUMAR** TIME: 2 WEEKS

TRAINER NAME: **PAVAN** TIME: 3 WEEKS

☎ +1 281-801-0921 🌐 www.kalpracademy.com ✉ Registration@kalpracademy.com

📍 13111 Westheimer Rd., Suite 311, Houston, TX, 77077