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AWS Certified Big Data -Specialty (BDS-C00)

Gain in-depth knowledge in designing and managing big data solutions on the AWS platform through real-time examples. You will also get an opportunity to work on industry based real-time sample projects in our training, and this will enable you to become a certified AWS Big Data Specialist.

Intended Audience

- Solutions architects
- SysOps administrators
- Data scientists
- Data analysts

Course Objectives

- Fit AWS solutions inside a Big Data ecosystem
- Implement core AWS Big Data services according to basic architecture best practices
- Design and maintain Big Data
- Leverage tools to automate data analysis

Course Duration

36 Hours – Lab + Lectures

8 Hours - Project

Course Outline

Introduction to Cloud Computing

- Understanding Cloud Computing
- Benefit and Feature of Cloud Computing
- Explain on Platform as a Service (PaaS), SaaS, IaaS
- Cloud Trends
- Public and Private Cloud
- Principles of Parallel and Distributed Computing
- Depth explain on Virtualization
- Architecture of Cloud Computing

- Major Player on Cloud Infrastructure

Understanding Core AWS Service

- Introduction to Amazon Web Services
- AWS Global Infrastructure
- Multi-Factor Authentication
- Creating our first IAM user
- Launching First EC2 Instance
- Introduction to Block & Object Storage Mechanism
- Introduction to Elastic Block Store
- Auto Scaling
- Introduction to S3
- S3 Storage Classes
- S3 Lifecycle Policies
- Introduction to Relational Databases
- Understanding RDS
- Understanding NoSQL Databases
- Understanding CloudWatch
- Understanding Route53
- Introduction to Content Delivery Networks
- Understanding Edge Locations
- Deploying CloudFront Distribution
- S3 Transfer Acceleration
- Infrastructure as Code
- Understanding CloudFormation
- Amazon Recognition
- Overview of AWS ElasticBeanstalk

AWS BIG Data Introduction and Overview

- What is Big Data?
- Big Data: Beyond the Hype
- Big Data and Data Science
- Use Cases
- Processing Big Data
- Why AWS for Big Data
- Databases Services in AWS
- Data Warehousing in AWS
- Redshift, Kinesis and EMR
- DynamoDB, Machine Learning and Lambda

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AWS BIG Data Ingestion / Collection Service

- Fundamentals of Amazon Kinesis
- Amazon Kinesis and Kinesis Stream
- Kinesis Data Stream Architecture and Core Components
- Data Producer
- Data Consumer
- Kinesis Stream
- Kinesis Stream Core Concepts
- Kinesis Firehose
- Loading Data into Kinesis Stream
- Delivering real-time streaming data directly to Amazon S3
- Migrate bulk data from on-premises storage platforms and Hadoop clusters to S3 buckets using Snowball
- AWS Services for collecting, processing, storing, and analyzing
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AWS BIG Data Storage Service

- Data lakes and Analytics
- Data Life Cycle
- Amazon S3 , Glacier and Big Data
- Store the Live Ingestion data on S3
- Relational vs Non Relational Databases
- Data Warehousing in AWS
- DynamoDB Introduction
- DynamoDB and EMR
- DynamoDB Partitions and Distributions
- DynamoDB GSI LSI
- DynamoDB Stream and Cross Region Replication
- DynamoDB Performance
- Snowball and AWS Big Data
- AWS Aurora in Big Data

AWS BIG Data Processing Service

- Big Data Storage Options
- Overview of Amazon Elastic MapReduce (EMR)
- EMR Cluster Architecture
- Apache Hadoop

- Apache Hadoop Architecture
- EMR Architecture
- EMR Releases and Cluster
- Hive on EMR
- Choosing Instance and Monitoring
- EMR File Storage

AWS BIG Data Analysis Service

- Redshift Overview
- Fundamentals of Amazon Redshift
- Amazon RedShift Architecture
- Choosing the Distribution Style
- Redshift Data types
- RedShift Data Loading
- COPY Command for Data Loading
- Columnar Databases
- Redshift Table Design
- Redshift Maintenance and Operations
- AI & ML in AWS
- Use the Deep Learning Services
- Machine Learning Algorithm
- Build, Train, and Deploy a Machine Learning
- Amazon SageMaker
- Amazon Elasticsearch
- Amazon Elasticsearch Services
- Athena

AWS BIG Data Visualization Service

- Introduction to AWS Bigdata Visualization Services
- Introduction to Amazon QuickSight
- Visual Types
- Amazon QuickSight: Stories
- Create a Storyboard
- Big Data Visualization
- Amazon QuickSight: Visualization
- Amazon QuickSight - Workflow and Use Cases

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PROJECTS

- To put your knowledge on into action, you will be required to work on two industry-based projects that discuss significant real-time use cases.
- These projects are completely in-line with the modules mentioned in the curriculum and help you to clear the certification exam.