

Building Modern Data Analytics Solutions on AWS

Course Duration: 8 Hours

Course code: BDA-AWS

1. Course Overview

The **Building Modern Data Analytics Solutions on AWS** course is designed to equip learners with the knowledge and hands-on skills required to design, build, secure, and scale modern data analytics solutions using AWS services. This course covers data ingestion, storage, processing, visualization, and governance while leveraging AWS analytics tools to derive meaningful insights and enable data-driven decision-making.

2. What You'll Learn?

By the end of this course, you will be able to:

- Understand the key concepts of modern data analytics and data lakes on AWS.
- Build and manage data ingestion pipelines using AWS services.
- Design scalable data storage solutions with Amazon S3 and related services.
- Process large-scale data with Amazon EMR, AWS Glue, and Amazon Redshift.
- Visualize data effectively using Amazon QuickSight.
- Implement data security, governance, and compliance practices.
- Optimize performance and costs in data analytics solutions.

3. Target Audience

This course is ideal for:

- Data Engineers and Data Architects.
- Data Scientists and Analysts.
- Cloud Architects who want to build analytics solutions.
- IT Professionals working with data warehousing and business intelligence.
- Anyone interested in implementing analytics workflows on AWS.

4. Pre-Requisites

Before attending this course, participants should have:

- Basic knowledge of cloud computing concepts.
- Familiarity with AWS services such as EC2, S3, and IAM.
- Understanding of databases, SQL, and data processing concepts.
- Experience in working with data analytics tools will be helpful but not mandatory.

5. Course Content

Module 1: Introduction to Data Analytics on AWS

- Modern data analytics concepts
- AWS data analytics ecosystem overview
- Understanding data lakes and warehouses

Module 2: Data Ingestion and Collection

- Collecting and streaming data with Amazon Kinesis and AWS DMS
- Batch ingestion with AWS Glue and S3
- Real-time data processing

Module 3: Data Storage Solutions

- Designing storage with Amazon S3
- Data partitioning and lifecycle management
- Integrating storage with data lake architecture

Module 4: Data Processing and Transformation

- Processing data with AWS Glue and Amazon EMR
- ETL (Extract, Transform, Load) workflows
- Working with Amazon Redshift for large-scale analytics

Module 5: Data Visualization and Reporting

- Creating dashboards with Amazon QuickSight
- Connecting QuickSight with Redshift, S3, and RDS
- Building interactive reports

Module 6: Security, Governance, and Cost Optimization

- Managing access with IAM and Lake Formation
- Implementing compliance and governance
- Monitoring, auditing, and optimizing costs

Module 7: Building End-to-End Data Analytics Solutions

- Designing a real-world analytics architecture
- Hands-on lab: Building a complete solution
- Best practices and use cases