

Course Outline:

Module 1: Introduction to data lakes

- Describe the value of data lakes
- Compare data lakes and data warehouses
- Describe the components of a data lake
- Recognize common architectures built on data lakes

Module 2: Data ingestion, cataloging, and preparation

- Describe the relationship between data lake storage and data ingestion
- Describe AWS Glue crawlers and how they are used to create a data catalog
- Identify data formatting, partitioning, and compression for efficient storage and query
- Lab 1: Set up a simple data lake

Module 3: Data processing and analytics

- Recognize how data processing applies to a data lake
- Use AWS Glue to process data within a data lake
- Describe how to use Amazon Athena to analyze data in a data lake

Module 4: Building a data lake with AWS Lake Formation

- Describe the features and benefits of AWS Lake Formation
- Use AWS Lake Formation to create a data lake
- Understand the AWS Lake Formation security model
- Lab 2: Build a data lake using AWS Lake Formation

Module 5: Additional Lake Formation configurations

- Automate AWS Lake Formation using blueprints and workflows
- Apply security and access controls to AWS Lake Formation
- Match records with AWS Lake Formation FindMatches

- Visualize data with Amazon QuickSight
- Lab 3: Automate data lake creation using AWS Lake Formation blueprints
- Lab 4: Data visualization using Amazon QuickSight

Module 6: Architecture and course review

- Post course knowledge check
- Architecture review
- Course review