

Building Data Analytics Solutions Using Amazon Redshift

Course Duration: 8 Hours (1 Day)

Overview

The Building Data Analytics Solutions Using Amazon Redshift course is designed to equip learners with the expertise to leverage Amazon Redshift for Data warehousing and analytics. This comprehensive Amazon Redshift course covers a range of topics from data analytics use cases to the intricate details of Amazon Redshift's Architecture, features, and management practices. As learners progress through the course, they'll explore how Amazon Redshift fits into the data analytics pipeline, learning about Ingestion, Storage, Processing, Optimization, and Security. With interactive demos and practice labs, participants will gain hands-on experience, including working with Semi-structured data, Advanced querying, and Resource management. The course also delves into Data transformation, Automation, and Optimization techniques to enhance performance. Furthermore, it addresses the critical aspects of securing and monitoring Amazon Redshift clusters, ensuring that learners understand the best practices for maintaining a robust Data warehouse environment. By the end of this Amazon Redshift training, participants will have a solid understanding of modern data Architectures on AWS, preparing them to design and implement effective data warehouse analytics solutions.

Audience Profile

This course provides an in-depth exploration of building data analytics solutions using Amazon Redshift, tailored for IT professionals focused on data warehousing.

- Data Engineers
- Database Administrators
- Data Analysts
- Business Intelligence Professionals
- IT Architects focusing on Data Solutions
- Cloud Solution Architects
- Technical Managers overseeing Data Teams
- Data Scientists seeking to understand data warehousing solutions
- AWS Cloud Practitioners
- Developers working with Big Data solutions
- IT Professionals aiming to specialize in data analytics on AWS
- System Administrators managing data storage and processing systems
- Professionals preparing for AWS certification exams related to data analytics and databases

Course Syllabus

Module 1: Overview of Data Analytics and the Data Pipeline

- Data analytics use cases

- Using the data pipeline for analytics
- Module 1: Using Amazon Redshift in the Data Analytics Pipeline
- Why Amazon Redshift for data warehousing?
- Overview of Amazon Redshift

Module 2: Introduction to Amazon Redshift

- Amazon Redshift architecture
- Interactive Demo 1: Touring the Amazon Redshift console
- Amazon Redshift features
- Practice Lab 1: Load and query data in an Amazon Redshift cluster

Module 3: Ingestion and Storage

- Ingestion
- Interactive Demo 2: Connecting your Amazon Redshift cluster using a Jupyter notebook with
- Data API
- Data distribution and storage
- Interactive Demo 3: Analyzing semi-structured data using the SUPER data type
- Querying data in Amazon Redshift
- Practice Lab 2: Data analytics using Amazon Redshift Spectrum

Module 4: Processing and Optimizing Data

- Data transformation
- Advanced querying
- Practice Lab 3: Data transformation and querying in Amazon Redshift
- Resource management
- Automation and optimization
- Interactive demo 5: Amazon Redshift cluster resizing from the dc2.large to ra3.xlplus cluster

Module 5: Security and Monitoring of Amazon Redshift Clusters

- Securing the Amazon Redshift cluster
- Monitoring and troubleshooting Amazon Redshift clusters
- Module 6: Designing Data Warehouse Analytics Solutions
- Activity: Designing a data warehouse analytics workflow
- Module B: Developing Modern Data Architectures on AWS
- Modern data architecture

