

# BUILDING DATA ANALYTICS SOLUTIONS USING AMAZON REDSHIFT

Course Code: 821497

Learn to integrate Amazon Redshift with a data lake to support both analytics and machine learning workloads.

In this course, you will build a data analytics solution using Amazon Redshift, a cloud data warehouse service. The course focuses on the data collection, ingestion, cataloging, storage, and processing components of the analytics pipeline. You will learn to integrate Amazon Redshift with a data lake to support both analytics and machine learning workloads. You will also learn to apply security, performance, and cost management best practices to the operation of Amazon Redshift.

## What You'll Learn

- Compare the features and benefits of data warehouses, data lakes, and modern data architectures
- Design and implement a data warehouse analytics solution
- Identify and apply appropriate techniques, including compression, to optimize data storage
- Select and deploy appropriate options to ingest, transform, and store data
- Choose the appropriate instance and node types, clusters, auto scaling, and network topology for a particular business use case
- Understand how data storage and processing affect the analysis and visualization mechanisms needed to gain actionable business insights
- Secure data at rest and in transit
- Monitor analytics workloads to identify and remediate problems
- Apply cost management best practices

## Who Needs to Attend

- Data warehouse engineers
- Data platform engineers
- Architects and operators who build and manage data analytics pipelines

## Prerequisites

Students with a minimum one-year experience managing data warehouses will benefit from this course. We recommend that attendees of this course have:

- Completed either AWS Technical Essentials or Architecting on AWS
- Completed Building Data Lakes on AWS

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CLASSROOM LIVE

\$695 USD

1 Day

## Classroom Live Outline

### **Module A: 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
- Interactive Demo 4: Applying mixed workload management on Amazon Redshift
- 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**

- Data warehouse use case review
- Activity: Designing a data warehouse analytics workflow

#### **Module B: Developing Modern Data Architectures on AWS**

- Modern data architectures

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VIRTUAL CLASSROOM LIVE

\$695 USD

1 Day

## Virtual Classroom Live Outline

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Aug 14 - 14, 2026 | 8:30 AM - 4:30 PM EDT

Nov 6 - 6, 2026 | 8:30 AM - 4:30 PM EST

Jan 22 - 22, 2027 | 8:30 AM - 4:30 PM EST

Feb 5 - 5, 2027 | 8:30 AM - 4:30 PM EST



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PRIVATE GROUP TRAINING

1 Day

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