

Building Data Analytics Solutions Using Amazon Redshift – Intensive Training («AWSB06»)

In this course, you will build a data analytics solution using Amazon Redshift, a cloud data warehouse service.

Duration: 1 day

Price: 900.–

Course documents: Digital original AWS courseware

Content

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.

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

- 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 architecture

Key Learnings

- Comparing the features and benefits of data warehouses, data lakes, and modern data architectures
- Designing and implementing a data warehouse analytics solution
- Identifying and applying appropriate techniques, including compression, to optimize data storage
- Selecting and deploying appropriate options to ingest, transform, and store data
- Choosing the appropriate instance and node types, clusters, auto scaling, and network topology for a particular business use case
- Understanding how data storage and processing affect the analysis and visualization mechanisms needed to gain actionable business insights
- Securing data at rest and in transit
- Monitoring analytics workloads to identify and remediate problems
- Applying cost management best practices

Methodology & didactics

This course includes presentations, interactive demos, practice labs, discussions, and class exercises.

Target audience

This course is intended for the following job roles:

- Data Engineer

Requirements

Attending the following course or equivalent knowledge is required:

- [Building Data Lakes on AWS – Intensive Training \(«AWSB04»\)](#)
- [Architecting on AWS – Intensive Training \(«AWSA01»\)](#)
- [AWS Technical Essentials – Intensive Training \(«AWSE01»\)](#)

Further courses

- [Building Batch Data Analytics Solutions on AWS – Intensive Training \(«AWSB05»\)](#)

Any questions?

We are happy to advise you on +41 44 447 21 21 or info@digicomp.ch. You can find detailed information about dates on www.digicomp.ch/courses-it-

