

# 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

## 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 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](mailto:info@digicomp.ch). You can find detailed information about dates on [www.digicomp.ch/courses-digital-](http://www.digicomp.ch/courses-digital-)

