



# Data warehousing on AWS

## **AWS Data warehousing Overview**

### **Learning Objective**

- ❖ **Discuss the core concepts of data warehousing.**

### **Topics Covered**

- ❑ **Course Introduction**
- ❑ **Introduction to Data Warehousing**

## **AWS Redshift**

### **Learning Objective**

- ❖ **Evaluate the relationship between Amazon Redshift and other big data systems.**

## Topics Covered

- ❑ Introduction to Amazon Redshift
- ❑ Understanding Amazon Redshift Components and Resources
- ❑ Launching an Amazon Redshift Cluster

## AWS Data Warehousing Analytics

### Learning Objective

- ❖ Evaluate use cases for data warehousing workloads and review case studies that demonstrate implementation of AWS data and analytic services as part of a data warehousing solution.

## Topics Covered

- ❑ Reviewing Data Warehousing Approaches

## Identity and Database Management

### Learning Objective

- ❖ Choose an appropriate Amazon Redshift node type and size for your data needs.
- ❖ Discuss security features as they pertain to Amazon Redshift, such as encryption, IAM permissions, and database permissions.

- ❖ **Launch an Amazon Redshift cluster and use the components, features, and functionality to implement a data warehouse in the cloud.**

## Topics Covered

- ❑ **Launching an Amazon Redshift Cluster**
- ❑ **Reviewing Data Warehousing Approaches**
- ❑ **Identifying Data Sources and Requirements**

## Database and Analytics

### Learning Objective

- ❖ **Use other AWS data and analytic services, such as Amazon DynamoDB, Amazon EMR, Amazon Kinesis Firehose, and Amazon S3, to contribute to the data warehousing solution.**
- ❖ **Evaluate approaches and methodologies for designing data warehouses.**
- ❖ **Identify data sources and assess requirements that affect the data warehouse design.**

## Topics Covered

- ❑ **Launching an Amazon Redshift Cluster**
- ❑ **Reviewing Data Warehousing Approaches**

- ❑ Identifying Data Sources and Requirements

## **Data Warehousing Loading and Maintenance**

### **Learning Objective**

- ❖ Design the data warehouse to make effective use of compression, data distribution, and sort methods.
- ❖ Load and unload data and perform data maintenance tasks.

### **Topics Covered**

- ❑ Designing the Data Warehouse
- ❑ Loading Data into the Data Warehouse

## **Data Warehousing Query and Logs and Tuning**

### **Learning Objective**

- ❖ Write queries and evaluate query plans to optimize query performance.
- ❖ Configure the database to allocate resources such as memory to query queues and define criteria to route certain types of queries to your configured query queues for improved processing.
- ❖ Use features and services, such as Amazon Redshift database audit logging, Amazon CloudTrail, Amazon CloudWatch, and Amazon Simple

**Notification Service (Amazon SNS), to audit, monitor, and receive event notifications about activities in the data warehouse.**

- ❖ **Prepare for operational tasks, such as resizing Amazon Redshift clusters and using snapshots to back up and restore clusters.**
- ❖ **Use a business intelligence (BI) application to perform data analysis and visualization tasks against your data.**

## Topics Covered

- ❑ **Writing Queries and Tuning Performance**
- ❑ **Maintaining the Data Warehouse**