### Course duration

3 days

# **Course Benefits**

- Discuss the core concepts of data warehousing.
- Evaluate the relationship between Amazon Redshift and other big data systems.
- 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.
- 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.
- 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.
- Design the data warehouse to make effective use of compression, data distribution, and sort methods.
- Load and unload data and perform data maintenance tasks.
- 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.

#### **Authorized AWS Training**

Webucator has partnered with an Authorized AWS training delivery partner to offer official AWS courses utilizing Amazon Authorized Instructors.

### **Course Outline**

- 1. Introduction to Data Warehousing
- 2. Introduction to Amazon Redshift
- 3. Launching Clusters
- 4. Designing the Database Schema
- 5. Identifying Data Sources
- 6. Loading Data
- 7. Writing Queries and Tuning Performance
- 8. Amazon Redshift Spectrum
- 9. Maintaining Clusters
- 10. Analyzing and Visualizing Data

# **Class Materials**

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

Class Prerequisites

Experience in the following is required for this AWS class:

- Skill obtained in course AWS Technical Essentials (or equivalent experience with AWS).
- Familiarity with relational databases and database design concepts.

**Prerequisite Courses** 

Courses that can help you meet these prerequisites:

AWS Technical Essentials