Building Data Analytics Solutions Using Amazon Redshift

Course Duration: 8 Hours **Course Code: AWS- RED-301**

1. Course Overview

The *Building Data Analytics Solutions Using Amazon Redshift* course is designed to help professionals gain hands-on expertise in designing, building, and managing data analytics solutions using Amazon Redshift. This course covers key concepts such as data ingestion, transformation, loading, query optimization, performance tuning, and security implementation. By the end of the course, learners will be able to create scalable, secure, and high-performance data warehouses that enable powerful business insights.

2. What You'll Learn?

- Understand the fundamentals of Amazon Redshift and its architecture
- Design and implement data ingestion pipelines
- Perform data transformation and loading efficiently
- Optimize query performance and manage workloads
- Implement best practices for monitoring, security, and compliance
- Build scalable data analytics solutions for real-world business use cases

3. Target Audience

This course is ideal for:

- Data Engineers
- Data Analysts
- Business Intelligence (BI) Developers

- Database Administrators
- Solution Architects
- Anyone interested in mastering Amazon Redshift for large-scale data analytics

4. Pre-Requisites

To get the most out of this course, participants should have:

- Basic knowledge of SQL and relational databases
- Familiarity with AWS services such as S3, IAM, and EC2
- Understanding of data analytics concepts (preferred, not mandatory)

5. Course Content

Module 1: Introduction to Amazon Redshift

- Overview of Data Warehousing in AWS
- Redshift architecture and core concepts
- Comparing Redshift with other data warehousing solutions

Module 2: Designing and Implementing Data Ingestion

- Data ingestion from multiple sources
- Integration with Amazon S3, Kinesis, and Glue
- COPY command and best practices

Module 3: Data Transformation and Loading

- ETL and ELT pipelines with Redshift
- Using AWS Glue for transformation
- Loading structured and semi-structured data

Module 4: Querying and Analyzing Data

- SQL queries in Redshift
- Joins, aggregations, and advanced functions
- Working with BI tools like QuickSight

Module 5: Performance Tuning and Optimization

- Distribution styles and sort keys
- Query optimization techniques
- Workload management (WLM) and concurrency scaling

Module 6: Security and Monitoring

- Data encryption and IAM policies
- Audit logging and monitoring with CloudWatch
- Compliance and security best practices

Module 7: Building Real-World Analytics Solutions

- Designing scalable analytics architectures
- Use cases and customer scenarios
- Hands-on project with Amazon Redshift

Phone: +91-999-911-1686 **Mail Us:** info@ssdntech.com