

CLOUD

ADVANCED

5 DAYS

AWS Relational Database Service (RDS) Essentials

Build a strong foundation in AWS RDS by understanding its features, use cases, and operational best practices. Learn how to provision, secure, optimize, back up, and migrate RDS databases while designing for high availability and disaster recovery.

Why AWS RDS?

Simplified Database Management

AWS RDS is a fully managed service, this allows your team to focus more on developing applications and less on infrastructure management.

Automated Backup and Point-in-Time Recovery

AWS RDS automates the backup process, allowing you to schedule regular backups of your databases easily.

High Availability and Reliability

AWS RDS provides built-in features for high availability and fault tolerance. It allows you to create replicas of your database across multiple Availability Zones

What you'll be able to do

- ✓ Gain a comprehensive understanding of AWS RDS, its features, benefits, and use cases.
- ✓ Learn how to provision and configure RDS database instances based on specific requirements.
- ✓ Explore the options available in AWS RDS for achieving high availability and implementing disaster recovery strategies.
- ✓ Understand the security features and best practices in AWS RDS.
- ✓ Learn techniques to optimize the performance of AWS RDS databases.
- ✓ Understand the backup and recovery options available in AWS RDS.
- ✓ Explore the different methods and tools available for migrating databases to AWS RDS.

Who this is for

- Developers Database Administrators System Administrators Cloud Architects Data Engineers

Curriculum

01 Introduction to AWS RDS

- Understanding the basics of AWS RDS
- Exploring the benefits of using AWS RDS for managing relational databases
- Apply concepts with guided exercises and validation checks

02 AWS RDS Database Engines

- Overview of different database engine options supported by AWS RDS
- Exploring the features and use cases of each database engine (e.g PostgreSQL
- Amazon Aurora)

03 Provisioning and Configuration of RDS Instances

- Creating RDS instances using the AWS Management Console
- Configuring instance settings, such as instance size, storage, and networking
- Apply concepts with guided exercises and validation checks

04 High Availability and Disaster Recovery

- Implementing Multi-AZ deployments for high availability
- Setting up and managing read replicas for load balancing and fault tolerance
- Apply concepts with guided exercises and validation checks

05 Security and Access Control

- Implementing security measures for AWS RDS, including encryption at rest and in transit
- Configuring database access using AWS Identity and Access Management (IAM) and database-specific access controls
- Apply concepts with guided exercises and validation checks

06 Performance Optimization and Monitoring

- Understanding performance optimization techniques for AWS RDS
- Monitoring RDS metrics using Amazon CloudWatch and identifying performance bottlenecks
- Apply concepts with guided exercises and validation checks

07 Backup and Restore Strategies

- Configuring automated backups and snapshots for data protection
- Performing point-in-time restores to recover databases to specific points in time
- Apply concepts with guided exercises and validation checks

08 Scaling and Elasticity

- Scaling RDS instances vertically and horizontally to handle increased workloads
- Implementing automatic scaling and using AWS services for database sharing
- Apply concepts with guided exercises and validation checks

09 Database Migration to AWS RDS

- Planning and executing database migration projects to AWS RDS
- Using AWS Database Migration Service (DMS) for seamless database migration
- Apply concepts with guided exercises and validation checks

10 Advanced Topics and Best Practices

- Exploring advanced features of AWS RDS, such as read replicas, cross-region replication, and database parameter groups
- Understanding best practices for managing and optimizing AWS RDS databases
- Apply concepts with guided exercises and validation checks

11 Troubleshooting and Performance Tuning

- Identifying common issues and troubleshooting techniques for AWS RDS
- Performance tuning strategies to optimize database performance and query execution
- Apply concepts with guided exercises and validation checks

12 Cost Optimization and Pricing Models

- Understanding different pricing models and cost optimization strategies for AWS RDS
- Choosing the suitable instance types, storage options, and reserved instances to optimize costs
- Apply concepts with guided exercises and validation checks