

AWS Certified Database-Specialty (DBS-C01) Prep

AWS DBS-C01 Database Specialty. RDS, DynamoDB, Redshift, and migration strategies.

IT Certifications Instructor: Brian Taylor • 5 sections • 42 lessons • 13.50h total

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About this course

This course prepares you for the AWS Certified Database Specialty (DBS-C01) exam. We cover RDS, DynamoDB, Redshift, ElastiCache, and migration strategies.

You will learn through hands-on labs, real database scenarios, and practice exams. The course includes video lessons and downloadable study materials.

Course curriculum

Foundations: The AWS Database Landscape

- **Decoding the DBS-CO1 Exam Blueprint (12m)**
We'll break down the exam structure, domains, and question types. Learn how to approach your study plan effectively.
- **Choosing Your Database: RDBMS vs. NoSQL (18m)**
Understand the fundamental trade-offs between relational and non-relational databases on AWS. We'll use a simple decision framework.
- **Deep Dive: Amazon RDS and Aurora (25m)**
A step-by-step guide to the most popular managed SQL services. We'll cover Multi-AZ, read replicas, and when to choose Aurora over RDS.
- **Deep Dive: DynamoDB and Key-Value Stores (28m)**
Learn how DynamoDB works with partitions, keys, and indexes. We'll analyze a real case study on building a serverless backend.
- **Specialized Workloads: Redshift and ElastiCache (15m)**
When do you need a data warehouse or an in-memory cache? We'll show you how to identify the right use cases for these services.
- **Database Migration: A Practical Overview (22m)**
Understand the tools for moving data into AWS, including DMS and SCT. We'll walk through a common migration scenario.
- **Cost and Security: The Two Pillars (14m)**
Get a high-level view of how AWS handles database security (IAM, KMS) and how to think about pricing models (On-Demand vs. Savings Plans).

Core Concepts: Deployment, Security, and Connectivity

- **VPC Fundamentals for Databases (20m)**
Why VPCs matter for databases. We'll explain private subnets, security groups, and network ACLs in a database context.
- **Identity and Access Management (IAM) for Databases (19m)**
Learn to configure IAM roles and policies for database access. This lesson includes a downloadable policy template.
- **Encryption at Rest and in Transit (16m)**
A practical guide to enabling encryption using AWS KMS for services like RDS and Redshift.
- **High Availability: Multi-AZ and Read Replicas (24m)**
We'll demonstrate how to configure and manage failover and read scaling for RDS and Aurora.
- **Backup and Restore Strategies (21m)**
Master automated backups, manual snapshots, and point-in-time recovery for your critical databases.
- **Performance Monitoring with CloudWatch (17m)**
Learn which metrics to watch and how to set up alarms for CPU, memory, and disk I/O.

- **Troubleshooting Common Connectivity Issues (23m)**
A problem-solving session on fixing the most common VPC and security group misconfigurations.
- **Managing Database Patches and Upgrades (11m)**
Understand the maintenance windows and procedures for keeping your database engines up to date.
- **Event Notifications and Database Events (9m)**
How to use SNS to stay informed about important database events and changes.

Deep Dive: Performance, Scaling, and Optimization

- **Performance Tuning Aurora Clusters (26m)**
Learn about Aurora's unique architecture and how to optimize its performance using specific parameters.
- **DynamoDB: Partitioning and Throttling Explained (29m)**
We'll solve a real-world problem: avoiding throttling by understanding and managing DynamoDB partitions.
- **ElastiCache: Redis vs. Memcached (13m)**
A clear comparison to help you choose the right in-memory engine for your caching needs.
- **Redshift: Distribution and Sort Keys (32m)**
A deep dive into the two most important concepts for optimizing query performance in Redshift.
- **Database Activity Streams for Aurora (10m)**
Learn how to use this feature to monitor database activity for security and compliance.
- **Cost Optimization Deep Dive (25m)**
We'll analyze cost reports and identify areas for savings, from storage to compute and I/O.
- **Auto Scaling for Databases (15m)**
Understand how to configure auto scaling for DynamoDB and Aurora Serverless.
- **Performance Insights: A Visual Approach (18m)**
Learn to use this powerful tool to pinpoint database performance bottlenecks.

Advanced Application: Migration, Analytics, and Serverless

- **Planning a Database Migration with DMS (27m)**
A step-by-step guide to planning and executing a database migration using the Database Migration Service.
- **Schema Conversion Tool (SCT) in Action (20m)**
We'll show you how SCT helps convert your database schema when moving between engine types.
- **Zero-Downtime Migration Strategies (22m)**
Learn techniques for minimizing application disruption during a database migration.
- **Building a Data Lake with S3 and Glue (19m)**
Understand how to use S3 as a data lake and Glue for ETL, querying with Athena and Redshift Spectrum.
- **Aurora Serverless: When and How to Use It (16m)**
A practical look at the v1 and v2 models for Aurora Serverless and their cost benefits.
- **DynamoDB Streams and Lambda Integration (24m)**
Real case study: building an event-driven architecture using DynamoDB Streams.

- **Connecting Analytics Services (Athena, Redshift Spectrum) (14m)**
Learn how these services query data directly from S3 without needing to load it into a database.
- **Database Options for Machine Learning (11m)**
Explore how services like Redshift ML and DynamoDB can be used in ML workflows.
- **Working with DocumentDB and Neptune (18m)**
A quick overview of these specialized database engines for MongoDB compatibility and graph databases.
- **Cross-Region Replication and DR Planning (21m)**
We'll design a disaster recovery plan using cross-region snapshots and replicas.

Implementation & Next Steps: Exam Readiness

- **Final Review: Key Service Comparisons (15m)**
A rapid-fire review of when to use each major database service. Includes a downloadable cheat sheet.
- **Common Exam Pitfalls and How to Avoid Them (18m)**
We'll break down common trick questions and the specific keywords to watch out for.
- **Practice Exam Strategy: Time Management (8m)**
Learn a proven strategy for pacing yourself through the exam questions.
- **Practice Exam 1: Walkthrough and Analysis (30m)**
We'll go through a set of practice questions, explaining the reasoning behind each correct answer.
- **Practice Exam 2: Advanced Scenarios (32m)**
Another set of challenging questions focusing on performance tuning and cost optimization.
- **Hands-On Lab: Build a 3-Tier Web App Database (35m)**
A final practical challenge: deploy a complete database solution for a sample web application.
- **Your Post-Certification Learning Path (7m)**
What's next after the DBS-CO1? We'll suggest areas for further specialization and learning.
- **Course Wrap-Up and Exam Day Checklist (5m)**
Final words of encouragement and a checklist for what to do before and on exam day.

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