AWS Cloud Financial Management for Builders

AWS Classroom Training

Course description

This course is for individuals who seek an understanding of how to manage, optimize, and predict costs as you run workloads on AWS. You learn how to implement architectural best practices, explore cost optimization strategies, and design patterns to help you architect cost-efficient solutions on AWS.

- Course level: Intermediate
- Duration: 3 days

Activities

This course includes presentations, hands-on labs, and demonstrations.

Course objectives

In this course, you will learn to:

- Explain the cost of core AWS services
- Determine and predict costs associated with current and future cloud workloads
- Use strategies and best practices to reduce AWS costs
- Use AWS tools to manage, monitor, alert, and optimize your AWS spend
- Apply strategies to monitor service costs and usage
- Implement governance standards, including resource tagging, account structure, provisioning, permissions, and access

Intended audience

This course is intended for:

- Solutions architects
- Developers
- Cost-optimization leads
- System administrators

Prerequisites

We recommend that attendees of this course have:

- *Architecting on AWS* classroom training

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Course outline

Day 1

Module 0: Couse Overview

- Course introduction

Module 1: Introduction to Cloud Financial Management

- Introduction to Cloud Financial Management
- Four pillars of Cloud Financial Management

Module 2: Resource Tagging

- Tagging resources
- Hands-On Lab: Cost optimization: Control Resource Consumption Using Tagging and AWS Config

Module 3: Pricing and Cost

- Fundamentals of pricing
- AWS Free Tier
- Volume discounts
- Savings plans and Reserved Instances
- Demonstration: AWS Pricing Calculator

Module 4: AWS Billing, Reporting, and Monitoring

- Understanding AWS invoices
- Reporting and planning
- AWS Cost Explorer
- AWS Budgets
- Demonstration: AWS Billing Console
- Demonstration: AWS Cost Explorer
- Demonstration: Trusted Advisor
- Hands-On Lab: Cost optimization: Deploy Ephemeral Environments Using Amazon EC2 Auto Scaling

Day 2

Module 5: Architecting for Cost: Compute

- Evolution of compute efficiency
- Amazon EC2 right-sizing
- Purchasing options
- Architect for Amazon EC2 Spot Instance
- Impact of software licensing
- Demonstration: Compute Optimizer
- Demonstration: Spot Instance Advisor
- Hands-On Lab: Cost optimization: Right Size Amazon EC2 Instances Using Amazon CloudWatch Metrics

Module 6: Architecting for Cost: Networking

- Data transfer costs
- Understand data costs for different services
- How to triage network costs
- Hands-On Lab: Cost optimization: Reduce Data Transfer Costs Using Amazon CloudFront and Endpoints

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Day 3

Module 7: Architecting for Cost: Storage

- Amazon EBS cost, pricing, and best practices
- Amazon S3 cost, pricing, and best practices
- Amazon EFS cost, pricing, and best practices
- Hands-On Lab: Cost optimization: Reduce Storage Costs Using Amazon S3 Lifecycle Management

Module 8: Architecting for Cost: Databases

- Amazon RDS cost, pricing, and best practices
- Amazon Aurora cost, pricing, and best practices
- Amazon DynamoDB cost, pricing, and best practices
- Amazon ElastiCache cost, pricing, and best practices
- Amazon Redshift cost, pricing, and best practices

Module 9: Cost Governance

- Setting up AWS Organizations
- AWS Systems Manager
- Hands-On Lab: Cost optimization: Reduce Compute Costs Using AWS Instance Scheduler

Module 10: Course Summary

- Course review