Building an AWS Multi-Tier Architecture by using a Capstone lab

AWS Classroom Training

Course description

Architectural solutions differ depending on industry, types of applications, and business size. AWS offers a broad set of global cloud-based products, including compute, storage, database, analytics, networking, mobile, developer tools, management tools, Internet of Things (IoT), security, and enterprise applications. These services help organizations move faster, lower IT costs, and scale.

As a Solutions Architect, you are often tasked with identifying services and features to build resilient, secure and highly available IT solutions on the AWS Cloud. In this course, you build a solution based on a scenario and then deploy a highly available architecture.

The goal of the Capstone lab is to give you an opportunity to analyze a situation, understand the requirements, and build the solution. We have posted **minimal** instructions to solve the problem. Don't worry, we have also included **hints** in case you get lost. You are **not** given any detailed step-by-step instructions during this lab.

As you complete the lab, think about what other solutions might fit the requirements. When would you choose those design choices, versus the choices that are used in the lab? Under what circumstances would your solution be a better choice, or a worse choice? Overall, we want you to think, and think like an architect.

At the end of this course, you can request the instructor for a detailed step by step lab instructions for comparison purposes with your implemented solution. But remember, during the course, you only get to use the hints available to build your solution.

- Course level: Advanced
- Duration: 4 hours

Activities

This course includes presentations, knowledge-checks, and a hands-on capstone lab.

Course objectives

In this course, you will:

- Solve several architectural challenges within a specific business case
- Answer some general questions about the AWS services related to the design
- Perform a series of actions to design a highly available architecture and deploy and configure the services needed to meet the requirements

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Intended audience

This course is intended for:

- Solution architects
- Solution-design engineers

Prerequisites

We recommend that attendees of this course have:

- Working knowledge of AWS cloud computing concepts
- Working knowledge of distributed systems
- Working knowledge of general networking concepts
- Working knowledge of multi-tier architectures

Course outline

This course covers the following concepts:

Introduction

- Introduction to the course
- Access to resources (Hands-on lab interface, scenario requirements, hints)

Module 1: AWS Services overview

- AWS Services and Infrastructure
- AWS Networking and Security
- Amazon Elastic Cloud Compute (EC2)
- AWS Database Solutions

Capstone Lab: Build an AWS Multi-Tier Architecture

- Review and Run a Pre-Configured AWS CloudFormation Template
- Create an Amazon RDS Database
- Create an Amazon Elasticache for MemCached
- Create an Amazon Elastic File System (EFS)
- Create an Application Load Balancer (ALB)
- Create the Application Servers by Configuring an Auto Scaling Group and a Scaling Policy
- Build a complete solution based on the scenario

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