

Designing and Implementing Storage on AWS

OEM: AWS • Code: DESIGNING_AND_IMPLEMENTING_STORAGE_ON_AW



COURSE DESCRIPTION

AWS offers a broad portfolio of storage services and solution options with diverse capabilities for storing, accessing, and protecting your data. In this course, you will learn where, how, and when to take advantage of these different service offerings. You will learn which services to consider when looking to solve your data storage challenges. You will learn how to best evaluate your options in selecting the appropriate AWS storage service to meet your use case and business requirements. You will also gain a better understanding of how to store, manage, and protect your data in the cloud. Through a series of hands-on exercises that demonstrate the ease and power of AWS platform, you will learn how to quickly provision powerful storage solutions in minutes.

AUDIENCE PROFILE

- Solution Architects
- Cloud Storage Engineers
- Cloud Operations Specialists
- DevOps Engineers

PREREQUISITES

- world experience

COURSE OBJECTIVES

By the end of this course, participants will be able to:

- Describe the benefits of the core AWS storage services and identify some of their primary use cases
- Select and design an appropriate storage solution according to application and business requirements
- Configure storage resources to work with the broad array of AWS service offerings
- Select the right method to move data between on-premises workloads and the AWS Cloud
- Protect data at rest & in transit
- Set up monitoring and observability for Cloud storage to gain insight into access patterns, utilization, and efficiency
- Design and optimize storage solutions according to cost, scalability, and performance requirements

Module 1: Introduction to Cloud Storage

- Storage in the AWS cloud
- Designing Well Architected Storage Solution
- Designing Durable and Available Storage Solutions
- Building Accessible and Secure Storage Solutions

Module 2: Designing Object Storage Solutions in AWS

- Hands-On Lab: Working with S3 objects, access points, and S3 Object Lambda
- What is object storage?
- Amazon S3 object storage
- Amazon S3 – use cases
- Accessing your Amazon S3 storage
- Planning and Designing your Amazon S3 deployment
- Access Control with Amazon S3

Module 3: Implementing Object Storage solutions with S3

- Hands-On Lab: Configuring and testing S3 versioning, replication, and MRAP Failover
- Design a cost-efficient strategy for storing objects in Amazon S3
- Transfer data to Amazon S3
- Protect data stored in Amazon S3
- Manage objects stored in Amazon S3 at scale

Module 4: Designing Block storage solutions in AWS

- Describe the characteristics block storage.
- Describe advantages and challenges of block storage.
- Describe Amazon EBS and Amazon EC2
- Describe Amazon EC2, AMIs, EBS volumes, and snapshots
- Differentiate the EC2 instance types and
- EBS volume types

Module 5: Implementing Block Storage Solutions with Amazon EBS

- Hands-On Lab: EBS Performance Lab
- Create and manage EBS volumes
- Create, manage and replicate EBS Snapshots
- Restore data from a snapshot

Module 6: File Storage and Amazon EFS

- Hands-On Lab: Using EFS with EC2, Lambda and ECS

- Cloud-based file storage
- Amazon EFS overview
- Access Amazon EFS
- Securing and protecting Amazon EFS

Module 7: Cloud file storage with Amazon FSx

- Hands-On Lab: Working with FSx OpenZFS and FSx Lustre
- Amazon FSx overview
- Amazon FSx for Windows File Server
- Amazon FSx for NetAPP ONTAP
- Amazon FSx for OpenZFS
- Amazon FSx for Lustre

Module 8: Hybrid and Edge Cloud Storage: On-Premises and Third-Party Connections

- Hybrid and edge cloud storage overview
- Introduction to AWS Storage Gateway
- AWS Storage Gateway architectures
- AWS Snow Family

Module 9: Moving data to AWS

- Hands-On Lab: Moving Data with DataSync and S3 File Gateway
- Moving data to AWS
- Working with AWS DataSync
- Implementing AWS Transfer Family

Module 10: Backup and Disaster Recovery with AWS

- Hands-On Lab: Creating AWS Backup plans
- Designing a data protection strategy
- Introduction to AWS Backup
- Using AWS Backup
- Working with AWS DRS

Module 11: Monitoring, Automating, and Optimizing your AWS Storage

- Hands-On Lab: Monitoring and Automating your storage environment
- Observability Services
- Amazon S3 observability tools
- Amazon EBS observability tools
- Amazon Cloudwatch
- AWS CloudTrail