Architecting on AWS - Accelerator

CODICE	**DT0172**
DURATA	**5 gg**
PREZZO	**2.300,00 €**
EXAM	

DESCRIZIONE

In this course, you will learn how to:

- Make architectural decisions based on AWS architectural principles and best practices
- Use AWS services to make your infrastructure scalable, reliable, and highly available
- Use AWS Managed Services to enable greater flexibility and resiliency in an infrastructure
- Make an AWS-based infrastructure more efficient to increase performance and reduce costs
- Use the Well-Architected Framework to improve architectures with AWS solutions

TARGET

IT Professionals

PREREQUISTI

We recommend that attendees of this course have:

- Attended AWS Technical Essentials classroom training or have equivalent experience
- Working knowledge of distributed systems
- Familiarity with general networking concepts
- Working knowledge of multi-tier architectures
- Familiarity with cloud computing concepts

CONTENUTI

Module 1: Introduction

- The real story of AWS
- Well-Architected Framework
- Six advantages of the cloud
- Global infrastructure

Module 2: The Simplest Architectures

- S3
- Glacier
- Choosing your regions
- Hands-on lab: Static Website

Module 3: Adding a Compute Layer

- EC2
- Storage solutions for instances
- Purchasing options such as dedicated host vs instances

Module 4: Adding a Database Layer

- Relational vs non-relational
- Managed databases
- RDS
- Dynamo DB
- Neptune
- Hands-on lab: Deploying a web application on AWS

Module 5: Networking in AWS Part 1

- VPC
- CIDR and subnets
- Public vs private subnets
- NAT and internet gateway
- Security groups

Module 6: Networking in AWS Part 2

- Virtual Private Gateway
- VPN
- Direct Connect
- VPC peering
- Transit Gateway
- VPC Endpoints
- Elastic Load Balancer
- Route 53
- Hands-on lab: Creating a VPC

Module 7: AWS Identity and Access Management (IAM)

- IAM
- Identity federation
- Cognito

Module 8: Organizations

- Organizations
- Multiple account management
- Tagging strategies

Module 9: Elasticity, High Availability, and Monitoring

- Elasticity vs inelasticity
- Monitoring with CloudWatch, CloudTrail, and VPC Flow Logs
- Auto scaling
- Scaling databases
- Hands-on lab: Creating a highly available environment

Module 10: Automation

- Why automate?
- CloudFormation
- AWS Quick Starts
- AWS Systems Manager
- AWS OpsWorks
- AWS Elastic Beanstalk

Module 11: Deployment Methods

- Why use a deployment method?
- Blue green and canary deployment
- Tools to implement your deployment methods
- CI/CD
- Hands-on lab: Automating infrastructure deployment

Module 12: Caching

- When and why you should cache your data
- Cloudfront
- Elasticache (Redis/Memcached)
- DynamoDB Accelerator

Module 13: Security of Your Data

- Shared responsibility model

- Data classification
- Encryption
- Automatic data security

Module 14: Building Decoupled Architecture

- Tight coupling vs loose coupling
- SQS
- SNS

Module 15: Optimizations and Review

- Review questions
- Best practices
- Activity: Design and architecture - two trues and one lie

Module 16: Microservices

- What is a microservice?
- Containers
- ECS
- Fargate
- EKS

Module 17: Serverless

- Why use serverless?
- Lambda
- API Gateway
- AWS Step Functions
- Hands-on lab: Implementing a serverless architecture with AWS Managed Services

Module 18: Building for Resilience

- Using managed services greatly increases resiliency
- Serverless for resiliency
- Issues with microservices to be aware of
- DDoS
- Hands-on lab: Amazon CloudFront content delivery and automating WAF rules

Module 19: Networking in AWS Part 3

- Elastic Network Adapter
- Maximum transmission units
- Global Accelerator

- Site to site VPN
- Transit Gateway

Module 20: Understanding Costs

- Simple monthly calculator
- Right sizing your instances
- Price sensitive architecture examples

Module 21: Migration Strategies

- Cloud migration strategies
- Planning
- Migrating
- Optimizing
- Hands-on lab: Application deployment using AWS Fargate

Module 22: RTO/RPO and Backup Recovery Setup

- Disaster planning
- Recovery options

Module 23: Final Review

- Architecting advice
- Service use case questions
- Example test questions