

AWSC-7 - ADVANCED ARCHITECTING ON AWS

Categoria: Amazon Web Services

INFORMAZIONI SUL CORSO

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Durata: 3 Giorni

Categoria: Amazon Web Services Qualifica Istruttore: Docente Senior (min. 5 anni) Dedicato a: Analista Produttore:

OBIETTIVI

In this course, you will learn to:

- -Review the AWS Well-Architected Framework to ensure understanding of best cloud design practices by responding to poll questions while following a graphic presentation
- -Demonstrate the ability to secure Amazon Simple Storage Service (Amazon S3) virtual private cloud (VPC) endpoint connections in a lab environment
- -Identify how to implement centralized permissions management and reduce risk using AWS Organizations organizational units (OUs) and service control policies (SCPs) with AWS Single Sign-On
- -Compare the permissions management capabilities of OUs, SCPs, and AWS SSO with and without AWS Control Tower to determine best practices based on use cases
- -Discuss AWS hybrid network designs to address traffic increases and streamline remote work while ensuring FIPS 140-2 Level 2, or Level 3 security compliance
- -Explore the solutions and products available to design a hybrid infrastructure, including access to 5G networks, to optimize service and reduce latency while maintaining high security for critical on-premises applications
- -Explore ways to simplify the connection configurations between applications and high-performance workloads across global networks
- -Demonstrate the ability to configure a transit gateway in a lab environment
- -Identify and discuss container solutions and define container management options
- -Build and test a container in a lab environment
- -Examine how the AWS developer tools optimize the CI/CD pipeline with updates based on near-real-time data
- -Identify the anomaly detection and protection services that AWS offers to defend against DDoS attacks
- -Identify ways to secure data in transit, at rest, and in use with AWS Key Management Service (AWS KMS) and AWS Secrets Manager
- -Determine the best data management solution based on frequency of access, and data query and analysis needs
- -Set up a data lake and examine the advantages of this type of storage configuration to crawl and query data in a lab environment
- -Identify solutions to optimize edge services to eliminate latency, reduce inefficiencies, and mitigate risks
- -Identify the components used to automate the scaling of global applications using geolocation and traffic control
- -Deploy and activate an AWS Storage Gateway file gateway and AWS DataSync in a lab environment
- -Review AWS cost management tools to optimize costs while ensuring speed and performance
- -Review migration tools, services, and processes that AWS provides to implement effective cloud operation models based on use cases and business needs
- -Provide evidence of your ability to apply the technical knowledge and experience gained in the course to improve



business practices by completing a Capstone Project

PREREQUISITI

We recommend that attendees of this course have:

- -Knowledge and experience with core AWS services from the Compute, Storage, Networking, and AWS Identity and Access Management (IAM) categories
- -Attended the Architecting on AWS classroom training OR
- -Achieved the AWS Certified Solutions Architect Associate certification OR
- -Have at least 1 year of experience operating AWS workloads

CONTENUTI

Module 1: Reviewing Architecting Concepts

- -Group Exercise: Review Architecting on AWS core best practices
- -Lab 1: Securing Amazon S3 VPC Endpoint Communications

Module 2: Single to Multiple Accounts

- -AWS Organizations for multi-account access and permissions
- -AWS SSO to simplify access and authentication across AWS accounts and third-party services
- -AWS Control Tower
- -Permissions, access, and authentication

Module 3: Hybrid Connectivity

- -AWS Client VPN authentication and control
- -AWS Site-to-Site VPN
- -AWS Direct Connect for hybrid public and private connections
- -Increasing bandwidth and reducing cost
- -Basic, high, and maximum resiliency
- -Amazon Route 53 Resolver DNS resolution

Module 4: Specialized Infrastructure

- -AWS Storage Gateway solutions
- -On-demand VMware Cloud on AWS
- -Extending cloud infrastructure services with AWS Outposts
- -AWS Local Zones for latency-sensitive workloads
- -Your 5G network with and without AWS Wavelength

Module 5: Connecting Networks

- -Simplifying private subnet connections
- -VPC isolation with a shared services VPC
- -Transit Gateway Network Manager and VPC Reachability Analyzer
- -AWS Resource Access Manager
- -AWS PrivateLink and endpoint services
- -Lab 2: Configuring Transit Gateways

Module 6: Containers



- -Container solutions compared to virtual machines
- -Docker benefits, components, solutions architecture, and versioning
- -Container hosting on AWS to reduce cost
- -Managed container services: Amazon Elastic Container Service (Amazon ECS) and Amazon Elastic Kubernetes Service (Amazon EKS)
- -AWS Fargate
- -Lab 3: Deploying an Application with Amazon ECS on Fargate

Module 7: Continuous Integration/Continuous Delivery (CI/CD)

- -CI/CD solutions and impact
- -CI/CD automation with AWS CodePipeline
- -Deployment models
- -AWS CloudFormation StackSets to improve deployment management

Module 8: High Availability and DDoS Protection

- -Common DDoS attacks layers
- -AWS WAF
- -AWS WAF web access control lists (ACLs), real-time metrics, logs, and security automation
- -AWS Shield Advanced services and AWS DDoS Response Team (DRT) services
- -AWS Network Firewall and AWS Firewall Manager to protect accounts at scale

Module 9: Securing Data

- -What cryptography is, why you would use it, and how to use it
- -AWS KMS
- -AWS CloudHSM architecture
- -FIPS 140-2 Level 2 and Level 3 encryption
- -Secrets Manager

Module 10: Large-Scale Data Stores

- -Amazon S3 data storage management including storage class, inventory, metrics, and policies
- -Data lake vs. data warehouse: Differences, benefits, and examples
- -AWS Lake Formation solutions, security, and control
- -Lab 4: Setting Up a Data Lake with Lake Formation

Module 11: Large-Scale Applications

- -What edge services are and why you would use them
- -Improve performance and mitigate risk with Amazon CloudFront
- -Lambda@Edge
- -AWS Global Accelerator: IP addresses, intelligent traffic distribution, and health checks
- -Lab 5: Migrating an On-Premises NFS Share Using AWS DataSync and Storage Gateway

Module 12: Optimizing Cost

- -On-premises and cloud acquisition/deprecation cycles
- -Cloud cost management tools including reporting, control, and tagging
- -Examples and analysis of the five pillars of cost optimization

Module 13: Migrating Workloads

- -Business drivers and the process for migration
- -Successful customer practices



- -The 7 Rs to migrate and modernize
- -Migration tools and services from AWS
- -Migrating databases and large data stores
- -AWS Schema Conversion Tool (AWS SCT)

Module 14: Capstone Project

-Use the Online Course Supplement (OCS) to review use cases, investigate data, and answer architecting design questions about Transit Gateway, hybrid connectivity, migration, and cost optimization

INFO

Esame: SAP-C02 - AWS Certified Solutions Architect Professional

Materiale didattico: Materiale didattico in formato digitale

Costo materiale didattico: incluso nel prezzo del corso a Calendario

Natura del corso: Operativo (previsti lab su PC)