

Corsi gratuiti AWS per Istituzioni aderenti all'area ICT della CRUI

Sessioni **Dicembre 2020**

AWS mette a disposizione una serie di **corsi professionali gratuiti** per gli le istituzioni aderenti all'area ICT della CRUI.

I corsi sono **gratuiti** per le istituzioni aderenti all'area ICT della CRUI (il costo è a carico di AWS) e vengono erogati in **italiano** ed in modalità **online** da istruttori certificati dei centri formazione ufficiali AWS.

Nel mese di Dicembre 2020 inizia il primo lotto di corsi ed altri verranno organizzati nel 2021. In questa prima fase sono consentite fino a 2 adesioni per ogni istituzione, con possibilità di iscrivere altro staff nel 2021 in base alle disponibilità. I corsi disponibili a Dicembre 2020 sono:

System Operations on AWS – Durata 3 giorni

- Target: Systems Administrators e Software Developers, specialmente se in ruoli DevOps
- Posti disponibili: 10
- Data: **9-10-11 Dicembre**

Architecting on AWS – Durata 3 giorni

- Target: Solutions Architects e Solution Design Engineers interessati alle architetture cloud
- Posti disponibili: 20 (due sessioni con stesso contenuto in date diverse)
- Data **Gruppo 1:** **14-15-16 Dicembre**
- Data **Gruppo 2:** **16-17-18 Dicembre**

AWS Cloud Practitioner Essentials – Durata 1 giorno

- Target: profili, anche non tecnici, interessati a comprendere l'architettura AWS.
- Posti disponibili: 10
- Data: **4 Dicembre**

I requisiti per la partecipazione ed ulteriori dettagli sono disponibili nelle schede allegate.

ISCRIZIONI: Le adesioni sono soggette a disponibilità. Per richiedere di partecipare scrivere a: segreteria@cruil.it

System Operations on AWS

AWS Classroom Training

Course description

This course is designed to teach those in a Systems Administrator or Development Operations (DevOps) role how to create automatable and repeatable deployments of networks and systems on the AWS Cloud. The course covers the specific AWS features and tools related to configuration and deployment, in addition to best practices for configuring and deploying systems.

Level	Delivery method	Duration
Intermediate	Instructor-led training, hands-on labs, and group exercises	3 days

Course objectives

This course is designed to teach you how to:

- Understand the AWS infrastructures as it relates to system operations such as the global infrastructure, core services and account security
- Use the AWS Command Line Interface, and understand additional administration and development tools
- Manage, secure, and scale compute instances on AWS
- Identify container services and services available for serverless computing
- Build virtual private networks with Amazon VPC
- Configure and manage storage options utilizing the storage services offered with AWS
- Monitor the health of your infrastructure with services such as Amazon CloudWatch, AWS CloudTrail and AWS Config
- Manage resource consumption in an AWS account using tags, Amazon CloudWatch, and AWS Trusted Advisor
- Create and configure automated and repeatable deployments with tools such as AMIs and AWS CloudFormation

Intended audience

This course is intended for:

- Systems Administrators and Software Developers, especially those in DevOps roles

Prerequisites

We recommend that attendees of this course have:

- Successfully completed the [AWS Technical Essentials](#) classroom training
- A background in either software development or systems administration
- Proficiency in maintaining operating systems at the command line, such as shell scripting in Linux environments or cmd/PowerShell in Windows
- Basic knowledge of networking protocols (TCP/IP, HTTP)

System Operations on AWS

AWS Classroom Training

Course outline

Day One

Module 1: Understanding systems operations on AWS

- Systems operations in the Cloud
- AWS Global Infrastructure
- Introduction to core services
- AWS Account Security
- AWS Identity and Access Management (IAM)
- Demonstration: Deploying a website

Module 2: Tooling and Automation

- AWS Command Line Interface (CLI)
- AWS System Manager
- Additional administration and development tools
- AWS Software Development Kit (SDK)
- AWS Cloud Formation
- AWS OpsWorks
- Hands-on lab 1: Using AWS System Manager

Module 3: Computing (Servers)

- Computing on AWS
- Managing your AWS instances
- Securing your AWS instances
- AWS EC2 instance pricing
- Hands-on lab 2: Creating Amazon EC2 instances

Module 4: Computing (scaling and name resolution)

- Elastic load balancing
- Amazon EC2 Auto Scaling
- Amazon Route 53
- Hands-on lab 3: Using Auto Scaling in AWS

Day Two

Module 5: Computing (Containers and Serverless)

- Containers on AWS
- AWS Lambda
- Amazon API Gateway
- AWS Batch

System Operations on AWS

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Module 6: Computing (Database Services)

- Amazon Relational Database Service (Amazon RDS)
- Amazon Aurora
- Amazon DynamoDB
- AWS Database Migration Services

Module 7: Networking

- Networking and Amazon Virtual Private Cloud (VPC)
- Securing your network
- Troubleshooting networks in AWS
- Hands-on lab 4: Configuring a Virtual Private Cloud (Windows & Linux)

Module 8: Storage and archiving

- Amazon Elastic Block Store (Amazon EBS)
- Amazon Store
- Amazon Elastic File System (Amazon EFS)
- Amazon Simple Storage Services (Amazon S3)
- Amazon S3 Glacier
- AWS Snowball
- Hands-on lab 5: Managing Storage in AWS (Windows & Linux)

Day Three

Module 9: Monitoring and security

- Amazon CloudWatch-Monitoring, Events, Logging
- AWS Cloud Trail
- AWS Configuration
- Amazon GuardDuty
- Hands-on lab 6: Monitoring your application and infrastructure with CloudWatch

Module 10: Managing resource consumption

- Tagging
- Cost reduction opportunities in the cloud
- Cost monitoring and billing alarms
- AWS Trusted Advisor
- Hands-on lab 7: Managing resources with tagging

Module 11: Creating automated and repeatable deployments

- Configuration management in the cloud
- Creating AMIs and building strategies
- Using configuration software
- AWS Cloud Formation
- Troubleshooting AWS Cloud Formation templates
- Hands-on lab 8: Automating deployments with Cloud Formation

Architecting on AWS

AWS Classroom Training

Course description

This course focuses on the fundamentals of building IT infrastructure on the AWS platform. You will learn how to optimize the AWS Cloud by understanding AWS services and how they fit into cloud-based solutions. Best practices and design patterns are covered to help you architect optimal IT solutions on the AWS Cloud. Build and explore a variety of infrastructures through guided discussions and hands-on activity.

Level	Delivery method	Duration
Intermediate	Instructor-led training, hands-on labs, and group exercises	3 days

Course objectives

This course is designed to teach you how to:

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

Intended audience

This course is intended for:

- Solutions Architects
- Solution Design Engineers
- Anyone who needs to understand the scope of cloud architectures

Prerequisites

We recommend that attendees of this course have:

- Taken the *AWS Cloud Practitioner Essentials* classroom or digital training
- Working knowledge of distributed systems and multi-tier architectures
- Familiarity with general networking and cloud computing concepts

Architecting on AWS

AWS Classroom Training

Course outline

Day One

Module 1: Introduction

- The Well-Architected Framework
- AWS Global Infrastructure

Module 2: The simplest architectures

- Amazon Simple Storage Service (Amazon S3)
- Amazon S3 Glacier
- Choosing AWS Regions for your architectures
- Hands-on lab: Hosting a Static Website

Module 3: Adding a compute layer

- Amazon Elastic Compute Cloud (Amazon EC2)
- Amazon Machine Images (AMIs)
- Amazon Elastic Block Storage (Amazon EBS)
- Amazon Elastic File System (Amazon EFS)
- Amazon FSx

Module 4: Adding a database layer

- Database layer considerations
- Amazon Relational Database Service (Amazon RDS)
- Amazon DynamoDB
- AWS Database Migration Service (AWS DMS)
- Hands-on lab: Deploying a Web Application on AWS

Module 5: Networking in AWS – Part 1

- Amazon Virtual Private Cloud (Amazon VPC)
- Network security in the cloud
- Hands-on lab: Creating a VPC

Day Two

Module 6: Networking in AWS – Part 2

- AWS VPN connections
- AWS Direct Connect (DX)
- VPC peering
- AWS Transit Gateway
- Load balancing on AWS
- Amazon Route 53

Module 7: AWS Identity and Access Management (IAM)

- Account users and AWS IAM
- Federating users

Architecting on AWS

AWS Classroom Training

- Amazon Cognito
- AWS Organizations

Module 8: Elasticity, high availability, and monitoring

- Amazon CloudWatch
- AWS CloudTrail
- Amazon EC2 Auto Scaling
- Scaling your databases
- Hands-on lab: Creating a highly available environment

Module 9: Automation

- AWS CloudFormation
- AWS Systems Manager
- AWS OpsWorks
- AWS Elastic Beanstalk
- Hands-on lab: Automating infrastructure deployment with AWS CloudFormation

Day Three

Module 10: Caching

- Caching on AWS with Amazon CloudFront
- Session management
- Amazon DynamoDB Accelerator (DAX)
- Amazon ElastiCache

Module 11: Building decoupled architectures

- Amazon Simple Queue Service (Amazon SQS)
- Amazon Simple Notification Service (Amazon SNS)

Module 12: Microservices and serverless architectures

- Amazon Elastic Container Service (Amazon ECS)
- AWS Fargate
- AWS Lambda
- Amazon API Gateway
- AWS Step Functions
- Hands-on lab: Implementing a serverless architecture with AWS Managed Services

Module 13: RTO/RPO and backup recovery setup

- Disaster planning
- Data replication
- Recovery strategies
- AWS Storage Gateway

Module 14: Optimization and review

- Best practices for optimization
- Review questions

AWS Cloud Practitioner Essentials

AWS Classroom Training

Course description

This fundamental-level course is intended for individuals who seek an overall understanding of the AWS Cloud, independent of specific technical roles. You will learn about AWS cloud concepts, AWS services, security, architecture, pricing, and support to build your AWS Cloud knowledge. Throughout the day there are hands-on lab exercises to reinforce some of the core concepts of the class. It also helps you prepare for the AWS Certified Cloud Practitioner exam.

Level	Modality	Duration
Fundamental	Instructor-led training and hands-on labs	1 day

Course objectives

In this course, you will learn how to:

- Define what the cloud is and how it works
- Differentiate between cloud computing and deployment models
- Describe the AWS Cloud value proposition
- Describe the basic global infrastructure of the cloud
- Compare the different methods of interacting with AWS
- Describe and differentiate between AWS service domains
- Given a scenario, identify an appropriate solution using AWS Cloud services
- Describe the Well-Architected Framework
- Describe basic AWS Cloud architectural principles
- Explain the Shared Responsibility model
- Describe security services with the AWS Cloud
- Define the billing, account management, and pricing models for the AWS platform

Intended audience

This course is intended for:

- Sales and Marketing
- Legal
- Business Analysts
- Project Managers
- AWS Academy students
- IT professionals

Prerequisites

- There are no prerequisites for this course.

AWS Cloud Practitioner Essentials

AWS Classroom Training

Course outline

Day One

Module 1: Introduction to the AWS Cloud

- What is the AWS Cloud?
- What are the benefits of the AWS Cloud?
- AWS global infrastructure
- AWS management interfaces

Module 2: Getting started with the cloud

- Get started with AWS services
- Build your infrastructure
- Store your data
- Secure your data
- Hands-on lab: Amazon Simple Storage Service

Module 3: Building in the cloud

- Go beyond servers and storage
- Monitor AWS resources
- Manage demand efficiently
- Deploy database services
- Automate deployment
- Connect and share data
- Deliver content faster.
- Hands-on lab: Build a Web Server on Amazon EC2

Module 4: Security

- Secure your infrastructure
- Manage authentication and authorization
- Assess your security and compliance
- Protect your infrastructure from Distributed Denial of Service (DDoS) attacks
- AWS security compliance

Module 5: Pricing models and cloud application support

- Fundamentals of pricing
- Cost estimating tools
- AWS Support
- Hands-on lab: Auditing Security with AWS Trusted Advisor

Module 6: Architecture

- The AWS Well-Architected Framework
- Reference architectures
- The future of the AWS Cloud