AWS Essentials for AWS Cloud Practitioners

Course Summary

Description

Amazon Web Services (AWS) is the leading cloud platform. It offers an unprecedented environment in which developers can implement world-class and world-scalable applications. Additionally, when done right, a cloud-based application usually offers about 50% cost saving when compared to self-hosting. However, in order to achieve this, one needs to be well-versed in the services that AWS offers, and in the best practices of using them.

This course provides an overview of AWS offering, benefits, and implementation techniques. It is intended for software developers building or thinking of building their next system in the cloud. It consists of 50% lectures and 50% implementation labs in the Amazon environment.

This two-day course can be reduced to a one-day introduction, or to a half-day workshop for management.

Topics

- AWS Cloud value proposition
- AWS Cloud and the basic global infrastructure
- AWS Cloud architectural principles
- Deploying and operating in the AWS Cloud
- Security and compliance
- Billing, account management, and pricing models
- Documentation, support, and technical assistance

Audience

This course is designed for software developers, and medium and senior level management.

Prerequisites

Before taking this course, students should be familiar with programming in at least one language and be able to navigate Linux command line. Students should also have basic knowledge of command line Linux editors (VI / nano).

Duration

Two days

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Course Outline

I. AWS Cloud value proposition

II. AWS Cloud and the basic global infrastructure
- A. History of Amazon, history of AWS
- B. Cloud computing
- C. Global infrastructure (regions)
- D. Availability, stability
- E. Hardware
- F. Security
- G. Audit trail

III. AWS Cloud architectural principles
- A. Storage
  1. The six AWS storage products and services
  2. S3 concepts, performance, pricing
  3. 99.999999999% durability
  4. Low cost Glacier
  5. Elastic Block Storage
  6. Storage Gateway
  7. AWS Import/Export
  8. Ephemeral storage
  9. Data delivery to the end user

  Lab: Deploying a solution to AWS
- B. Computing
  1. The three AWS computing services
  2. Elastic Compute Cloud (EC2)
  3. Oracle, SAP, Microsoft delivered through EC2
  4. Elastic Beanstalk - full application deployment

  Lab: Deploying computations
- C. Networking:
  1. Available Networks (Classic, VPC)
  2. Public / private
  3. Firewall rules

IV. Deploying and operating in the AWS Cloud
- A. Scaling
  1. Elastic Load Balancing
  2. Auto scaling groups
- B. Databases and managed services
  1. Redis
  2. Amazon relational database services
  3. DynamoDB - scalable NoSQL solution
  4. ElastiCache - in-memory datastores
  5. RedShift - petabyte scale managed warehouse

  Lab: Database deployed
- C. Deploying and managing your applications
  1. AMIs - choosing an AMI
  2. Amazon CloudWatch monitoring service
  3. AWS CloudFormation - scripting your data center
  4. AWS OpsWorks for administrators
  5. Amazon mobile services
  6. Mail, messaging, workflow

V. Security and compliance
- A. AWS identity managements for users and applications
- B. Key management

VI. Billing, account management, and pricing models

VII. Documentation, support, and technical assistance