Course Outline

AWS Academy Cloud Operations

Course Version

This course outline applies to version 1.0 of *AWS Academy Cloud Operations* in English.

Description

AWS Academy Cloud Operations is designed to prepare participants to pursue entry-level DevOps, support, and cloud operations roles. It will also help prepare them to take the AWS SysOps Administrator – Associate exam. Emphasizing best practices in the AWS Cloud and recommended design patterns, this course will teach students how to solve problems and troubleshoot various scenarios. The course will show students how to create automatable and repeatable deployments of networks and systems on AWS and covers specific AWS features and tools related to configuration and deployment. With case studies and demonstrations, students will learn how some AWS customers design their infrastructures and implement various strategies and services. Students will also have the opportunity to build a variety of infrastructures via guided, hands-on activities.

Curriculum Objectives

This course teaches students how to:
- Understand AWS infrastructure as it relates to system operations, such as global infrastructure, core services, and account security
- Use the AWS Command Line Interface (AWS CLI), and understand additional administration and development tools
- Manage, secure, and scale compute instances on AWS
- Manage, secure, and scale configurations
- Identify container services and AWS services that are available for serverless computing.
- Manage, secure, and scale databases on AWS
- Build virtual private networks with Amazon Virtual Private Cloud (Amazon VPC)
- Configure and manage storage options using 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 by using tags, Amazon CloudWatch, and AWS Trusted Advisor
- Create and configure automated and repeatable deployments with tools such as Amazon Machine Images (AMIs) and AWS CloudFormation

Duration

Approximately 40 hours. *AWS Academy Cloud Operations* is designed to be delivered over a semester. Actual delivery times vary depending on the format. This course must be delivered over a period of at least four weeks.

Intended Audience

This intermediate (200-level) course is intended for students attending AWS Academy member institutions.

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Employment Outcomes

This course is intended for prospective operations/support/DevOps roles including:

- Operations Engineer
- Support Engineer
- Application Support Engineer
- Product Support Engineer
- Customer Support Engineer
- Support Specialist

- Junior DevOps Engineer
- DevOps Engineer
- Operations Engineer
- Platform Engineer
- Cloud Engineer
- Site Reliability Engineer

Student Prerequisites

AWS Academy Cloud Operations requires a strong foundation in IT concepts and skills. To ensure success, students should have:

- Completed *AWS Academy Cloud Foundations* or have equivalent experience
- A working knowledge of at least one scripting language
- Familiarity with Linux, the command line and Application Programming Interfaces (APIs)
- Familiarity with virtualization and distributed computing
- An understanding of version control (e.g., Git)
- An understanding of data storage mechanisms such as SQL

Delivery Methods

Learning materials are provided to support in-person or online synchronous delivery. Educators may record their lectures for asynchronous delivery.

Educator Prerequisites

Educators must hold a current AWS SysOps Administrator – Associate certification.

Educator Accreditation

Educators must meet the prerequisites and have completed Technical Validation with an AWS Academy Technical Program Manager.

Learning Resources

- Video introductions
- Lecture materials
- Educator demo instructions
- Practical activities
- Lab exercises