

Video Streaming Essentials for AWS Media Services

AWS Classroom Training

Course description

In this course, you will learn best practices for designing and using cloud-based video workflows. It covers important concepts related to video processing and delivery, the variables that can impact migration decisions, and real-world examples of hybrid and cloud use cases for AWS Media Services. It also introduces security, machine learning, and analytics concepts to help you consider how AWS Media Services fit into your overall cloud strategy.

- Course level: Intermediate
- Duration: 2 days

Activities

This course includes presentations, demonstrations, and hands-on labs.

Course objectives

In this course, you will learn to:

- Articulate the essential terms and concepts fundamental to making video streaming workflow decisions, including video metrics, compression, distribution, and protocols.
- Describe the four fundamental stages of video streaming workflows: ingest, process, store, and deliver.
- Describe which AWS services can be used in each stage of a video streaming workflow, including ingest, processing, storage, and delivery.
- Analyze video streaming workflow diagrams using AWS services, based on simple to complex use cases.
- Recognize the key variables that influence workflow decisions.
- Recognize how AWS services for compliance, storage, and compute interact with AWS Media Services in video streaming workflows and the functions they perform.
- Use the AWS Management Console to build and run simple video streaming workflows for live and video-on-demand content.
- Recognize the automation and data analytics available for Media Services when used with AWS Machine Learning and explore media-specific use cases for these services.
- Explain the importance of security in the AWS Cloud and how it is applied in video streaming workflow

Intended audience

This course is intended for individuals who work in or are considering migration to AWS Media Services, including those in the following roles:

- Video Operator/Engineer
- Developer
- Architect
- Project Manager/Engineer

Prerequisites

We strongly recommend learners complete the required prerequisites prior to class, and suggest completion of the optional prerequisites for an optimal experience.

Required:

- [Video Streaming Concepts: AWS Media Services](#)
- [Introduction to AWS Media Services by Use Case](#)

Optional:

- *AWS Technical Essentials* ([digital](#) or [classroom](#))

Course outline

Day 1

- *Module 1: Important Video Concepts*
 - Resolution, bitrate, frame rate, latency, and compression
 - Codecs and containers
 - Group of pictures (GOP) encoding
 - ABR, packaging and distribution
 - Internet protocols used in video streaming
- *Module 2: Anatomy of Streaming Workflows*
 - Four stages of video streaming
 - Variables that affect design decisions
- *Module 3: Using AWS Services in Video-on-Demand (VOD) Workflows*
 - Converting a film or tape library for internet streaming
 - Increasing reach and accessibility using multiple languages and captions
 - Streaming edited highlights from a live event
 - Analyzing and tagging VOD files for media content analysis using machine learning and data analytics

Day 2

- *Module 4: Optimizing Workflows*
 - Security
 - Migrating to the cloud
 - Cloud financial management
- *Module 5: Using AWS Services in Live Workflows*
 - Challenges of live streaming
 - Live streaming a simple interview show
 - Live streaming a major sporting event to a global audience
 - Live switching between multiple inputs
 - Saving segments from a live show to create VOD segments
- *Module 6: Recap and Review*
- *Module 7: Next Steps*