AWS re:Invent

MDS309-R

Build basic live video workflows

Claire Southey
Specialist Solutions Architect
Amazon Web Services

AWS re:Invent

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Agenda

Introduction (5 min.)

Overview of session activities (10 min.)

AWS Elemental MediaPackage configuration (10 min.)

Decide on AWS Elemental MediaLive input (5 min.)

Create MediaLive input and channel (10 min.)

Configure RTMP source (5 min.) or use file source

Play streams; questions and debugging (remaining time)

Related sessions for live broadcasting

MDS306-R – Building resilient live streaming video workflows

MDS308-R – Create multi-language video with automated subtitling

MDS309-R – Build basic live video workflows

MDS311-R – Live broadcasting on AWS

MDS401-R – Achieve ultra-low latency for live video streaming

MDS403 – Launch a live video channel in minutes

Overview

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AWS Elemental Media services

Live video workflow

Live channel source

AWS Elemental Live
On-premises encoding

AWS Elemental MediaConnect
Live video transport

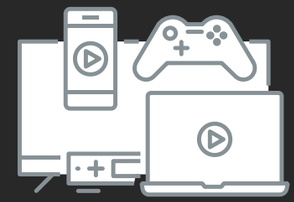
AWS Elemental MediaLive
Live video processing

AWS Elemental MediaPackage
Origination and JIT packaging

Amazon CloudFront
CDN

AWS Elemental MediaStore
Media-optimized storage and origin

AWS Elemental MediaTailor
Personalization and monetization



Devices

Video on-demand workflow

Media Source Files

Amazon S3
Storage

AWS Elemental MediaConvert
File-based video processing

AWS Step Functions
Workflow

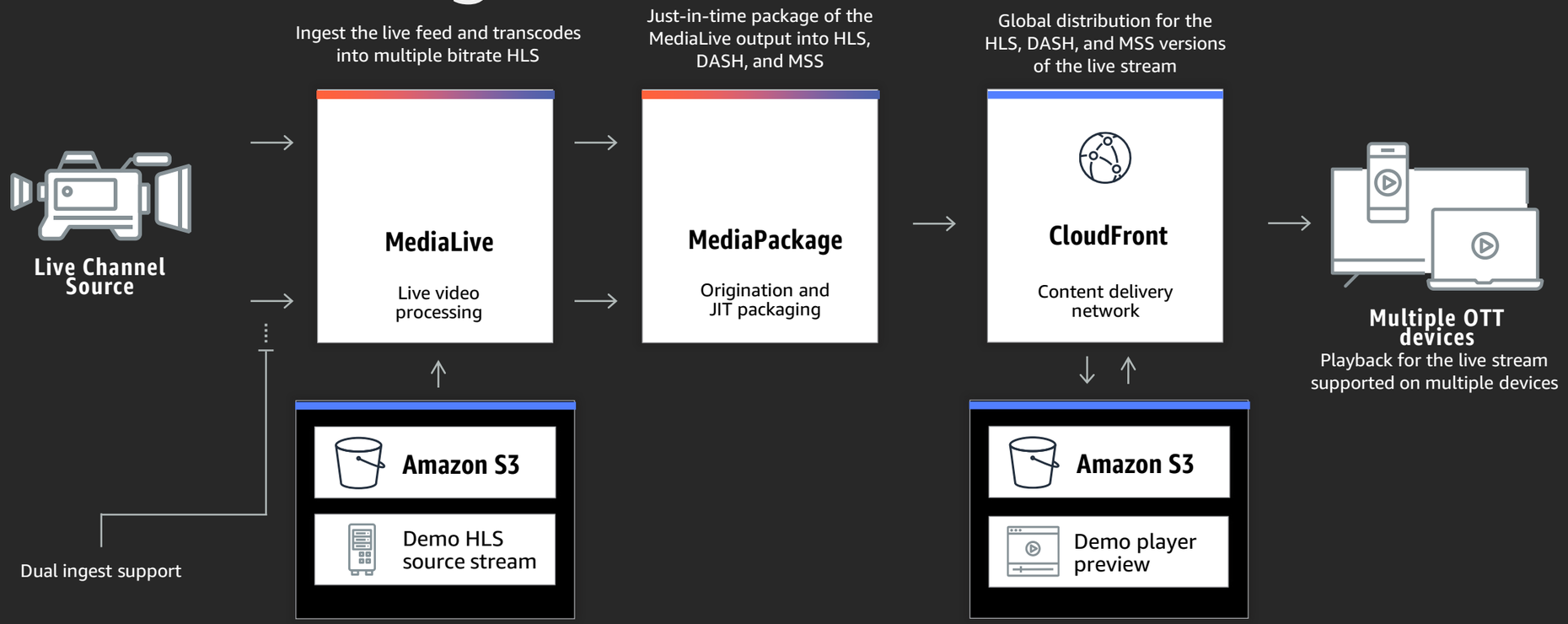
Amazon S3
VOD origin

Amazon CloudFront
CDN

CloudFront

- Global content delivery network
- Integrated with AWS WAF and AWS Shield
- Intelligence of Lambda@Edge compute capability
- Built-in security features
- Cost-effective pricing options

Live video streaming on AWS solution



Features

- Support for RTP, RTMP, and HLS inputs
- Dual input and built-in redundancy
- Multiple variable bitrate outputs from 1080p through 270p
- HLS, DASH, and MSS outputs

- Leverages the highly available and scalable features of MediaLive and MediaPackage
- Leverages CloudFront for global distribution
- Automated deployment through AWS CloudFormation and AWS Lambda

Create the video workflow

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Create the MediaPackage channel

1. Sign into the AWS Management Console
2. Navigate to the MediaPackage console
3. Open the left-side panel to display live channels, if needed
4. Click the Create button at the top right of the page
5. Provide an ID, like “reinvent-live-streaming” (remember this ID for later)
6. Enter a simple description
7. Select “Create a CloudFront distribution” in the second compartment
8. Click the Create button
   - CloudFront will take 15–25 minutes to complete
   - We do not need to wait

Decide on MediaLive input

Consider using an RTMP streaming application on your device if:

- You are familiar with RTMP in other contexts
- You already have or can install an RTMP streaming tool on your computer or device
- You feel comfortable with the extra steps involved in completing this workflow

Consider using file-based streaming from the cloud if:

- You are unfamiliar with AWS media services and RTMP
- You are not able to install software on your device
- You want an easy path for creating a cloud-based video workflow

Create MediaLive input

1. Navigate to the MediaLive console
2. Open the left-side panel to display inputs, if needed
3. Click “Create input” at the top right
4. Choose option 1 or option 2 next to create the input

Create MediaLive RTMP input (option 1)

- Provide a name, like “reinvent-live-input”
- Select “RTMP (push)” for input type
- Select “Create for Input Security Group” and use 0.0.0.0/0 as the filter
- Click “Create input security group”
- Enter “AppA” and “DestA” for Destination A
- Enter “AppB” and “DestB” for Destination B
- Click Create

Create MediaLive file input (option 2)

1. Provide a name, like “reinvent-file-input”
2. Select MP4 for input type
3. Paste the following into “Input source A” and “Input source B”:

   https://mds309.s3.amazonaws.com/bbb.mp4
4. Click Create

Create MediaLive channel

1. Navigate to the MediaLive console
2. Open the left-side panel to display channels, if needed
3. Click “Create channel”
4. Provide a channel name, like “reinvent-2019”
5. Create a new MediaLiveAccessRole (or use an existing one) for an IAM role
6. Choose “Live event” (MediaPackage) for the channel template
7. Choose SINGLE_PIPELINE for channel class
8. Add your input under Input Attachments, click Confirm
9. File input: Change source end behavior to Loop
10. Provide the MediaPackage channel ID under “Output groups”
11. Click “Create channel”
12. Click the Start button once the channel state is Idle

Configure RTMP source

1. Navigate to the MediaLive console
2. Open the left-side panel to display inputs, if needed
3. Find and select your RTMP input
4. Copy the first endpoint URL beginning with rtmp://
5. Paste this URL into your streaming application for the destination
6. Specify a starting resolution and rate of 1280x720p30
7. Start your device’s live stream
8. Check your MediaLive channel’s alerts to know when data is received

Test, debug, and show our video streams

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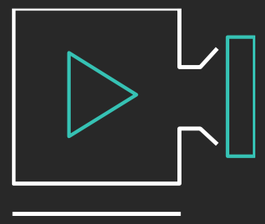
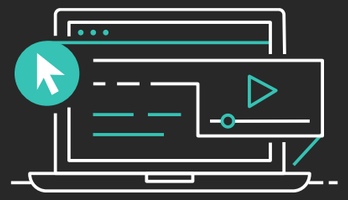
Learn media services with AWS Training and Certification

Resources created by AWS experts to help you create professional-quality media experiences



Learn from AWS media experts to advance your skills in streaming and monetizing live and on-demand video



20+ free digital media services courses and hands-on labs built by AWS experts, including Introduction to AWS Media Services and Setting Up and Configuring MediaConvert

Visit aws.amazon.com/training/path-mediaservices/

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aws training and certification

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