

Livestreaming in the Age of E-Sports

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Social Media Platform for Gamers – Twitch

Managing a Video platform – AWS Elemental Media Services

THE RISE OF E-SPORTS

- The total revenue of the eSports industry in **2015 was between \$325m and \$400m, & tops \$1b in 2019**
- Many prominent media companies launch eSport divisions to address the market
 - Comcast
 - Partner with SK Telecom to launch T1 Entertainment and Sports
 - Building \$50m Esports Arena in Philadelphia, PA
 - Viacom
 - Launching NickX eSports tournament platform
 - Disney
 - Overwatch League on ESPN1, ESPN2, ABC and Disney XD
 - Acquired majority stake in BAMTech
 - Amazon Purchased Twitch

<https://www.reuters.com/article/us-videogames-outlook/global-esports-revenues-to-top-1-billion-in-2019-report-idUSKCN1Q11XY>



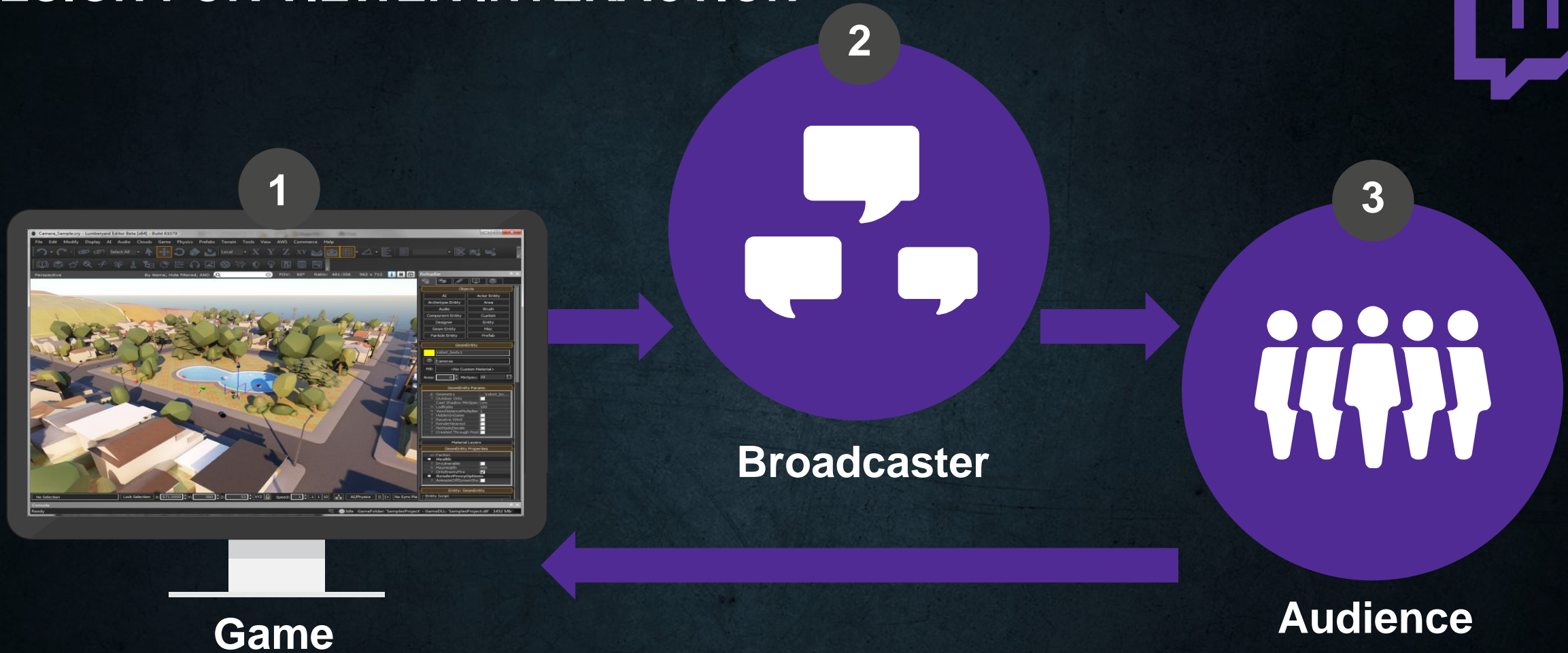
WHAT IS TWITCH - CREATE A FAN BASE!

- Leading **Social Video Platform** for **Gamers**
- Helps to build **strong communities** for your game
- Leverage entertaining players to **spread adoption**
 - Is this game worth getting?
 - How do I get better at this game?



100M+ unique viewers / month
106 minutes / person / day
2.1M peak concurrent viewers
Nearly 1/2 of Twitch users spend
20+ hrs/week on Twitch

DESIGN FOR VIEWER INTERACTION



TWITCH INTEGRATION



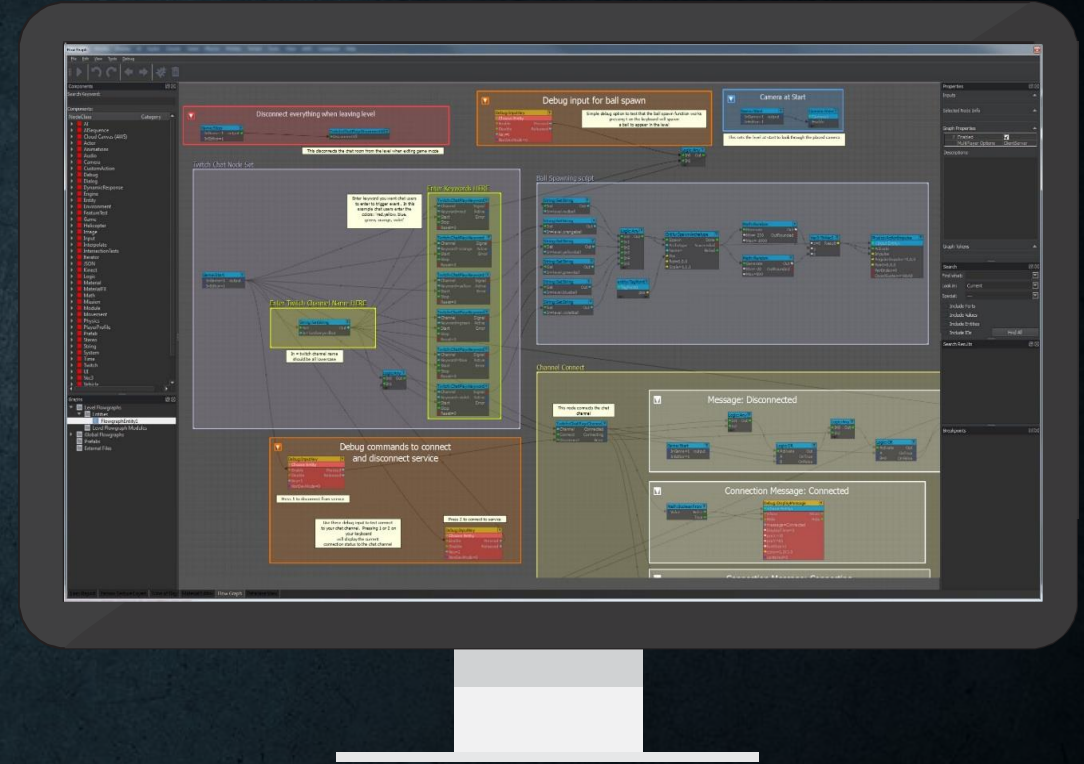
Twitch ChatPlay

Allows viewers to type chat commands to influence game



Twitch JoinIn

Broadcasters can invite viewers into their game





Twitch is a global video service and community where millions of people and thousands of interests come together each day

Live apps for live streams with Extensions

Learn how to use Twitch to engage and monetize viewers through Extensions and get started quickly with the developer rig.

Bring the Twitch experience into your game

Accelerate your development with Twitch by using ready to use tools and services. Learn about where we are headed and what game developers gain by integrating with Twitch.

Leveraging viewership, retention, and engagement analytics

Understand and expand your game on using data, analytics, and insights currently provided by Twitch.

Learn more: dev.twitch.tv

[f](#) [t](#) @TwitchDev





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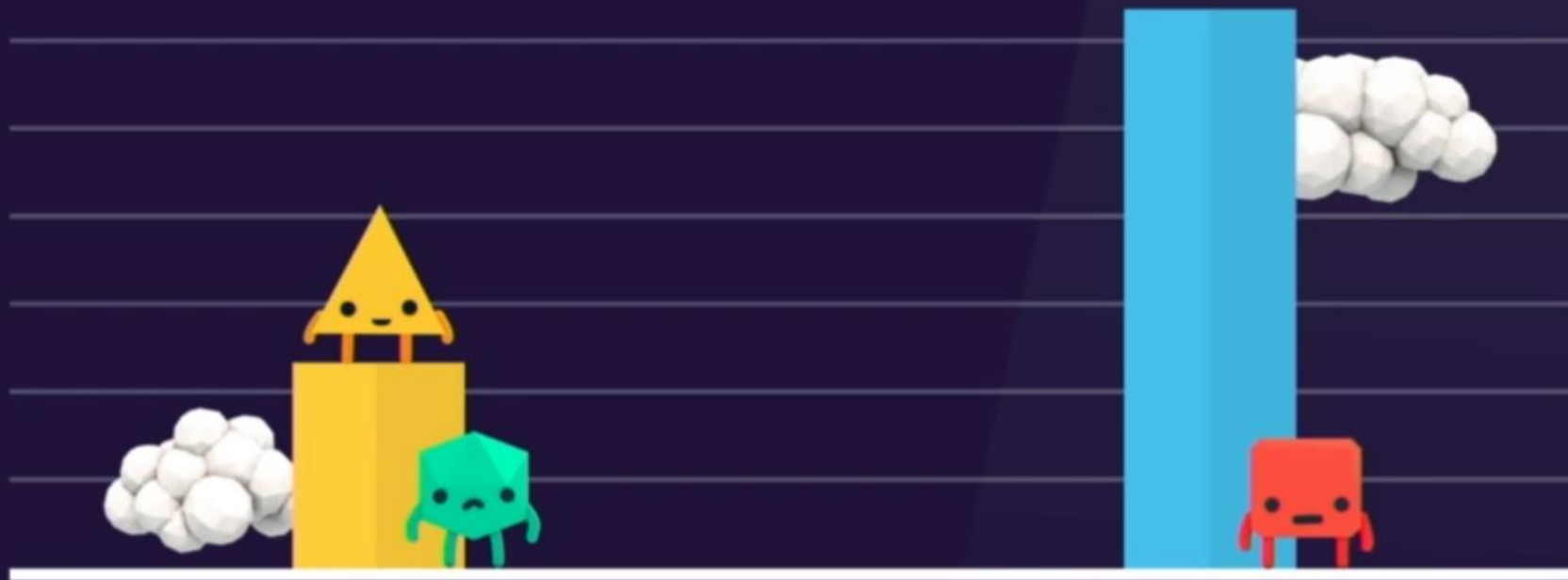
Extensions
now live

6 in 10

Partner/Affiliate
Channels

40%

Two or more
Extensions



4.9 Billion

Extension Interactions

16 Billion

Chat Messages





AWS Elemental Media Services

Transport, Process, Package, Originate, Monetize

Traditional industry chain IS RIGID & YET FRAGILE



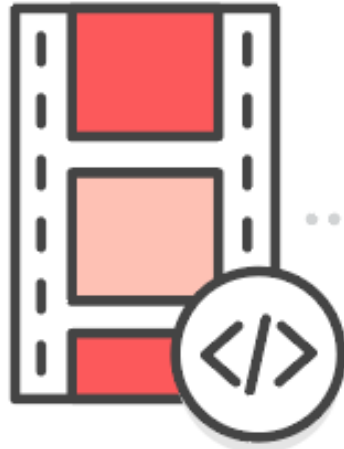
The cloud design is oriented with you and the viewer



Video streaming applications at a glance



Originate source content (live feed or VOD files)



Prep, process and protect (e.g. DRM, watermark) content using AWS Media Services

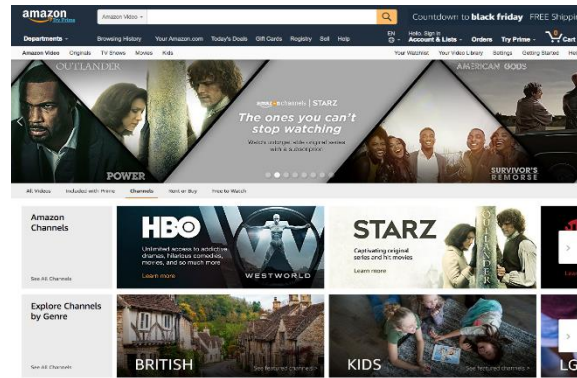


Deliver content via Amazon CloudFront

Video application use cases



Public Sector



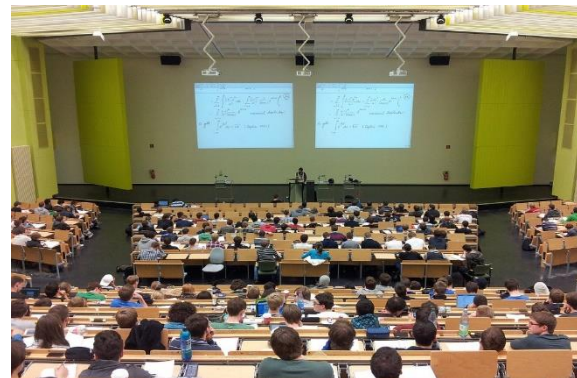
Live & VOD



Event



Pay TV

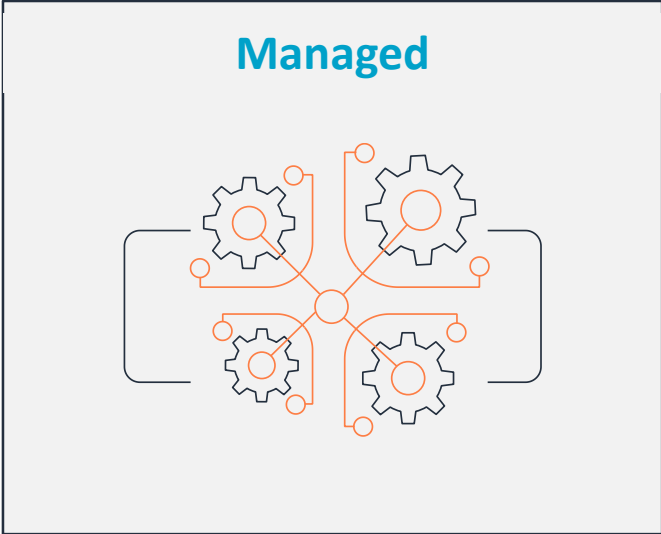
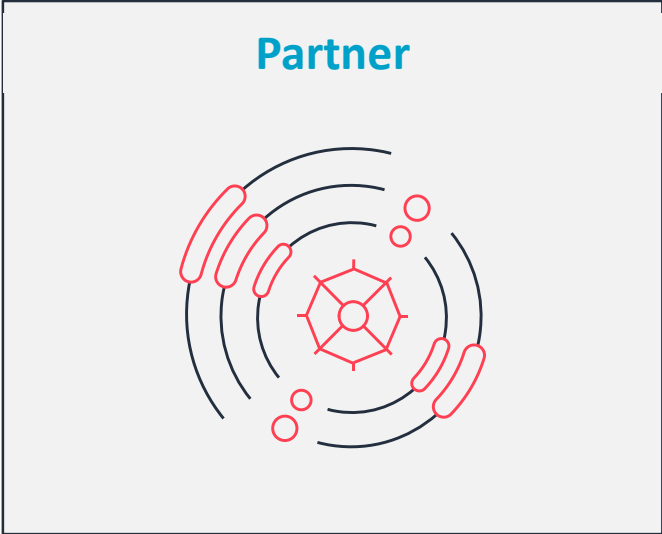
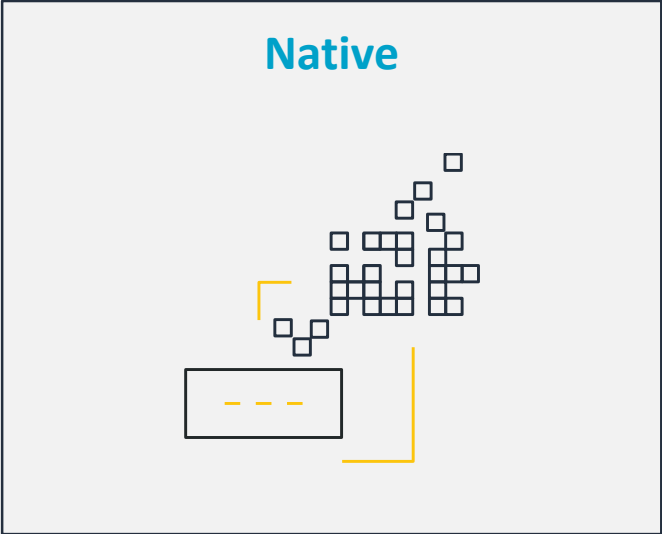


Classroom



Gaming

How to build your video workflows on AWS



AWS Media Solutions



Media2Cloud



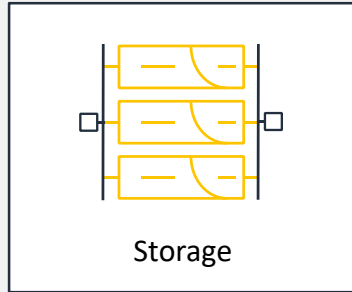
Live Streaming on AWS



VOD on AWS

Build from native AWS Services

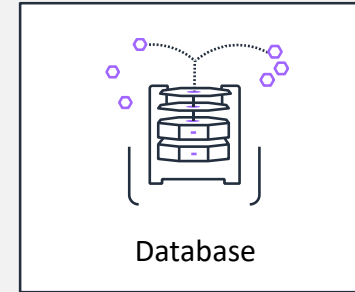
Native



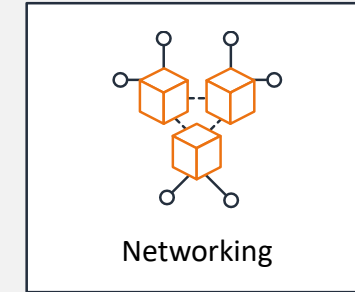
Storage



Compute



Database



Networking

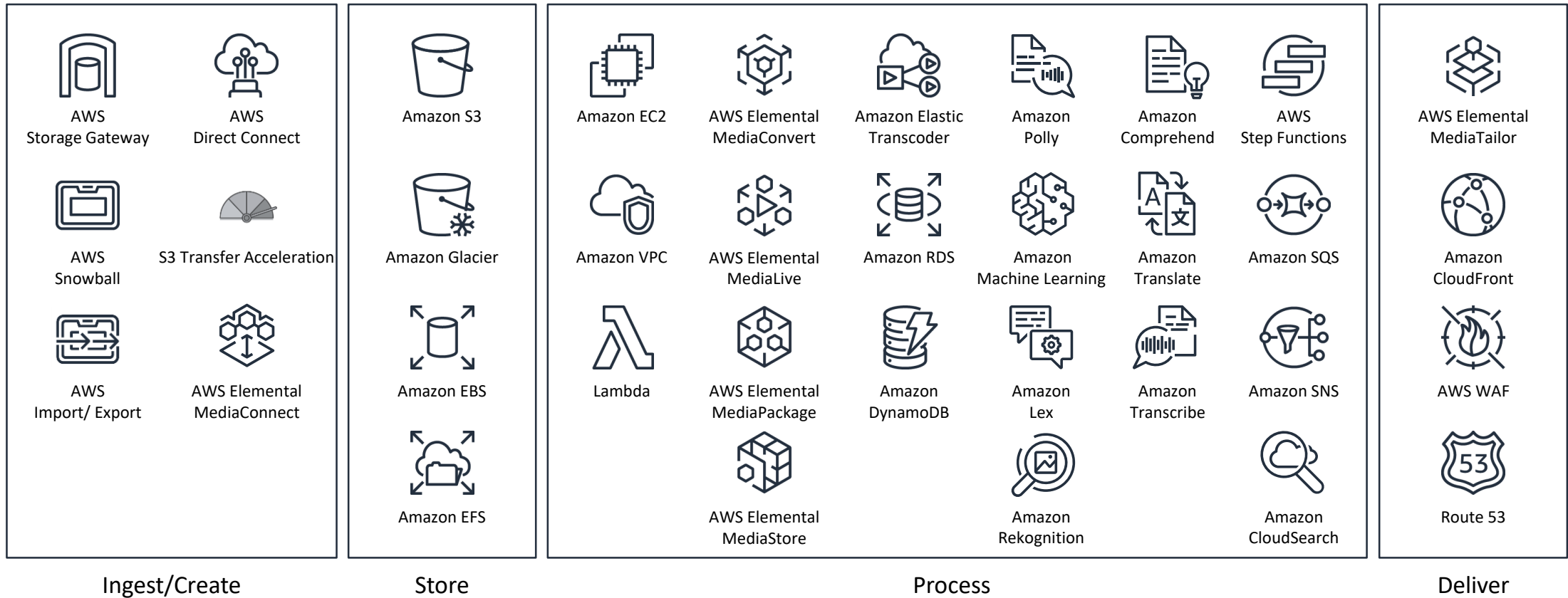
Build with an AWS Media Partner

Partner

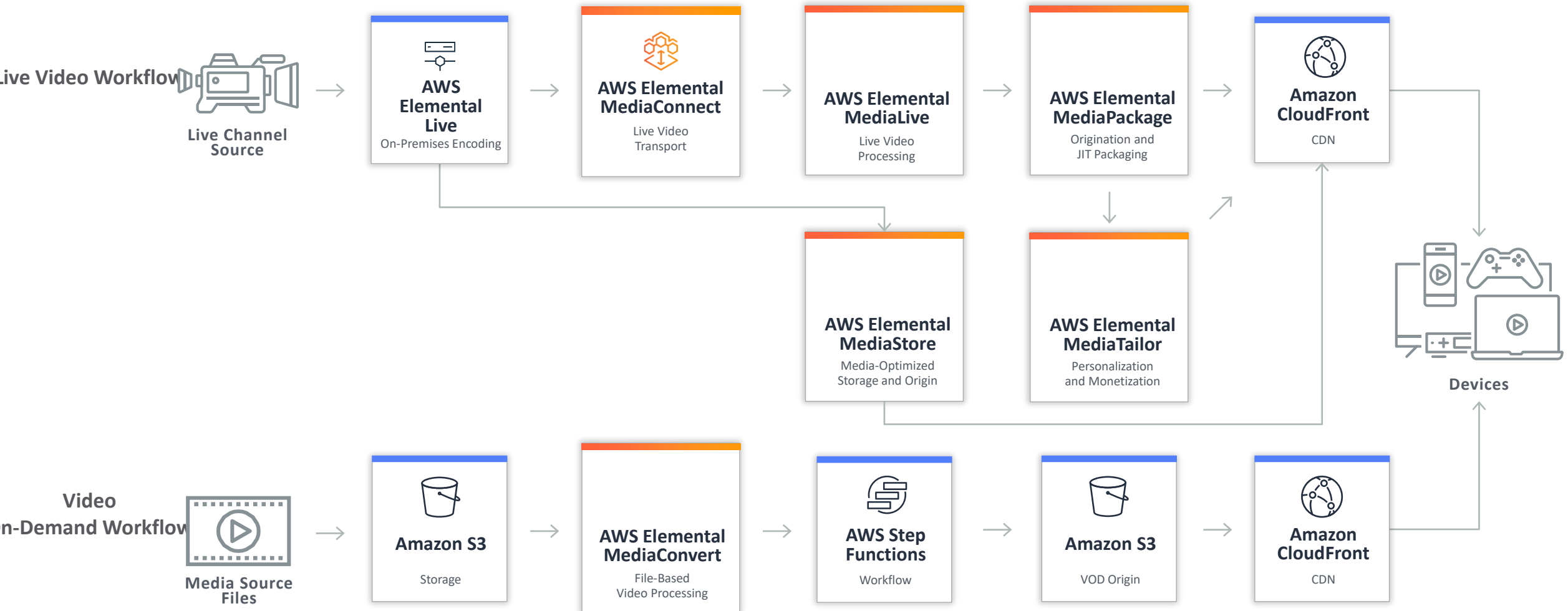


Build with AWS Managed Services

Managed



AWS Elemental Media Services



AWS MEDIA SERVICES INTRODUCTION



AWS Elemental MediaLive

Live encoding service



AWS Elemental MediaPackage

Video origination and just-in-time packaging service



AWS Elemental MediaStore

Media-optimized origin service



AWS Elemental MediaConvert

File-based video processing service



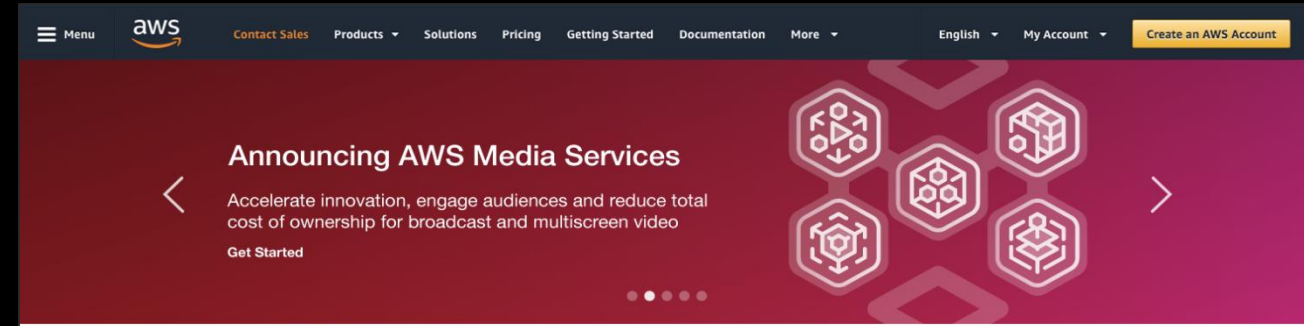
AWS Elemental MediaTailor

Server-side ad insertion to enable content personalization and monetization



AWS Elemental MediaConnect

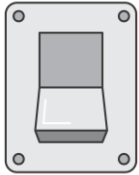
High-quality transport service for live video



Media Focused AWS services

- Building blocks which form the foundation for cloud-based video workflows
- When combined with other AWS services, offer a complete solution for processing and delivery of live or on-demand video content in the AWS cloud

AWS Video Streaming Solutions



One-Click Launch

Launch a **fully-tested solution** in your AWS account with **one click**



Well-architected

Rely on the architecture as it reflects **AWS best practices**



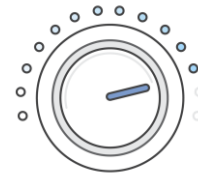
Scalability

Use the framework and available guides to **expand the solution** based on your needs



Accelerate Revenue

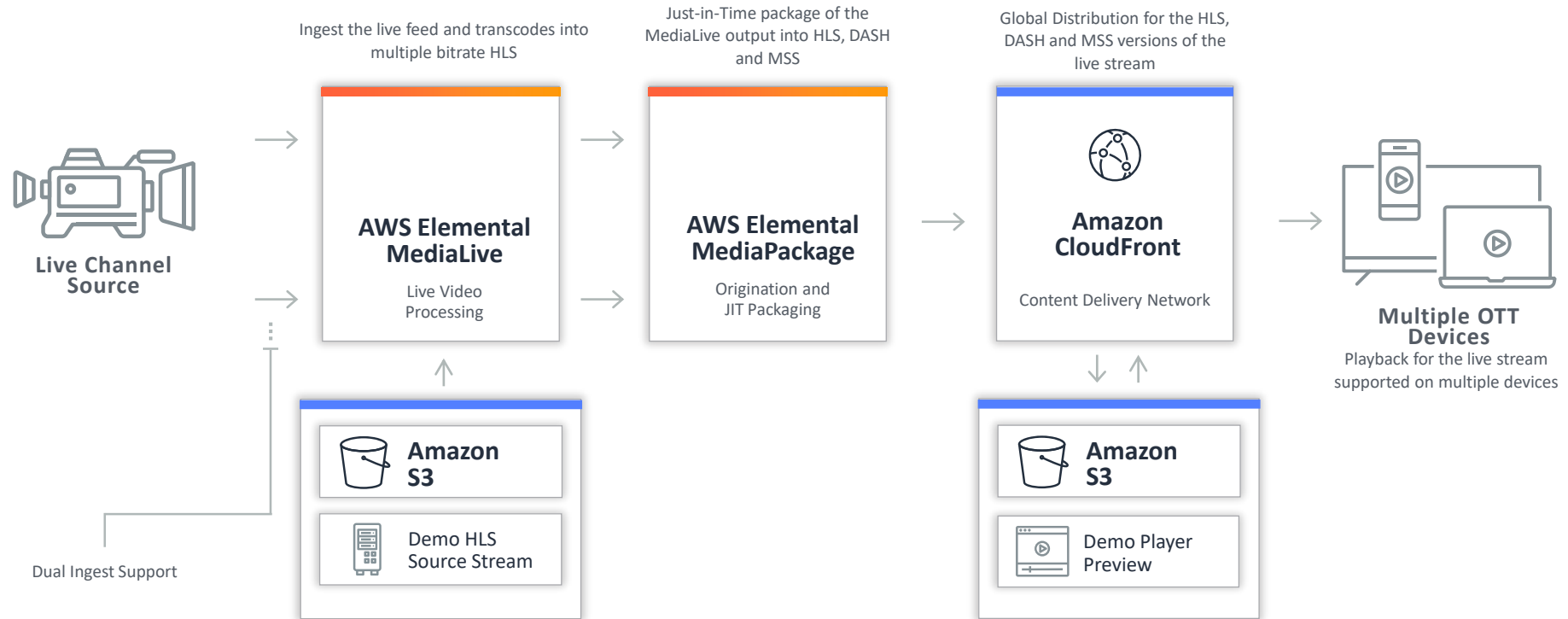
Get started with your **project quickly** and start **monetizing your content**



Agility

Save the resources of developing a solution from the beginning

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 AWS Elemental MediaLive and MediaPackage
- Leverages Amazon CloudFront for Global distribution.
- Automated deployment through CloudFormation and AWS Lambda



■ New Cloud Live, VOD, and Monetization Workflows at Scale

Problem Statement

Creating new live, VOD, and monetization workflows at low cost to enable greater agility, flexibility, and experimentation alongside aging master control infrastructure, hindering content production and distribution

Use of AWS

- AWS Elemental MediaLive to create 9 renditions and MediaPackage for origin and hot failover
- AWS Elemental MediaTailor for dynamic ad insertion handling SCTE-35 and SCTE-104, integrating from various ad servers
- Direct Connect to connect 100 stadiums and venues, S3 and Glacier for syndication to partners and permanent archive of recorded content

Business Benefits

- Live, linear encoding for 7 linear channels for Pac-12, showcasing over 850 live events
- Delivered with small devops team to stand up entire live linear workflow
- Standardizing workflows for consistently high video quality at scale
- Enables fast prototyping encouraging innovation and content creation

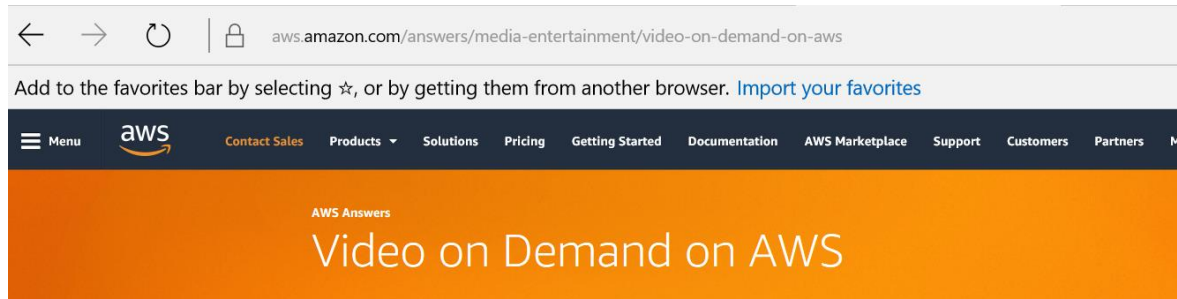


Summary: Cloud transformation of the industry

- Cloud enables innovative on-demand applications and new ways of consuming live television
 - Drive down costs
 - Optimize workflows
 - Unify video headends
 - Connect with viewers at massive scale
- AWS Media Services video capabilities allow customers to build larger and more complete media workflows from within the AWS console (traditional, serverless, ML/AI)
 - Media technologists have a better toolset to innovate
 - Expanding audiences with global reach

How can you get started?

View our documentation for an implementation guide, architecture diagrams, and more!



Now: Click – Deploy – Stream!

How do I implement a video-on-demand workflow on AWS?

Amazon Web Services (AWS) offers its customers several methods designed to cost-effectively deliver on-demand video content. These methods help enable you to dynamically scale any combination of video storage, processing, and delivery services on the AWS Cloud.

This webpage provides best practices and guidance to consider when implementing a video-on-demand workflow on the AWS Cloud. It provides an AWS solution that automatically provisions the services necessary to build a scalable, distributed architecture that ingests, stores, and delivers video content.

The following sections assume basic knowledge of architecting on the AWS Cloud, video-on-demand workflows, video encoding, and video delivery.

To learn more, visit [aws.amazon.com > answers > media-entertainment](https://aws.amazon.com/answers/media-entertainment).

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