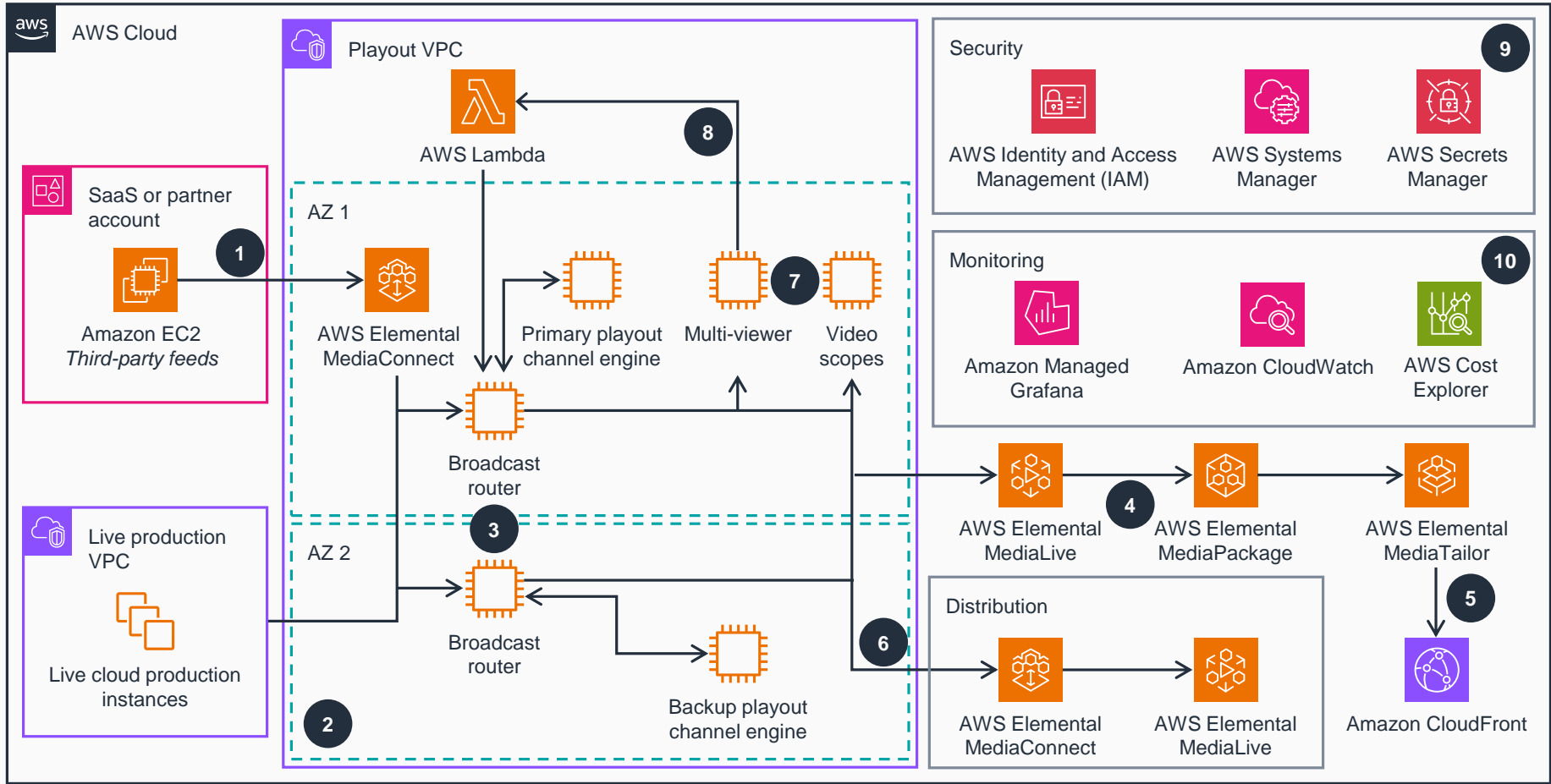


# Guidance for Playout Origination and Master Control Operation on AWS

This architecture diagram shows how to use a combination of managed AWS Services and independent software vendor (ISV) products to originate a playout channel.



- 1 An AWS independent software vendor (ISV) provides third-party feeds hosted on **Amazon Elastic Compute Cloud (Amazon EC2)**. **AWS Elemental MediaConnect** delivers contribution feeds.
- 2 A separate virtual private cloud (VPC) hosting a live event cloud production environment contributes feeds to the playout VPC using VPC peering.
- 3 Redundant broadcast routers running on **Amazon EC2** instances in two Availability Zones (AZs) receive and switch between sources. The broadcast router sends the feeds to the playout channel engines hosted on **Amazon EC2**.
- 4 The playout channel engines send the “program out” feed—combining the sources and other elements, such as graphics—back to the broadcast routers. **AWS Elemental MediaLive** and **AWS Elemental MediaPackage** also receive the feeds.
- 5 **AWS Elemental MediaTailor** performs dynamic ad-insertion on the over-the-top feed for distribution using **Amazon CloudFront**.
- 6 The playout channel output is also sent to the distribution, where **MediaConnect** and **MediaLive** deliver it to terrestrial or satellite distribution chains.
- 7 Multi-viewer and video scopes running on **Amazon EC2** monitor video feeds present in the broadcast router for quality assurance.
- 8 Monitoring tools generate alarms to implement automatic video routing after processing by **AWS Lambda**.
- 9 **AWS Systems Manager** facilitates centralized management and patching of all components, and **AWS Secrets Manager** stores all credentials needed to remotely access the instances.
- 10 **Amazon CloudWatch**, **Amazon Managed Grafana**, and **AWS Cost Explorer** monitor the performance and cost of all system components.

