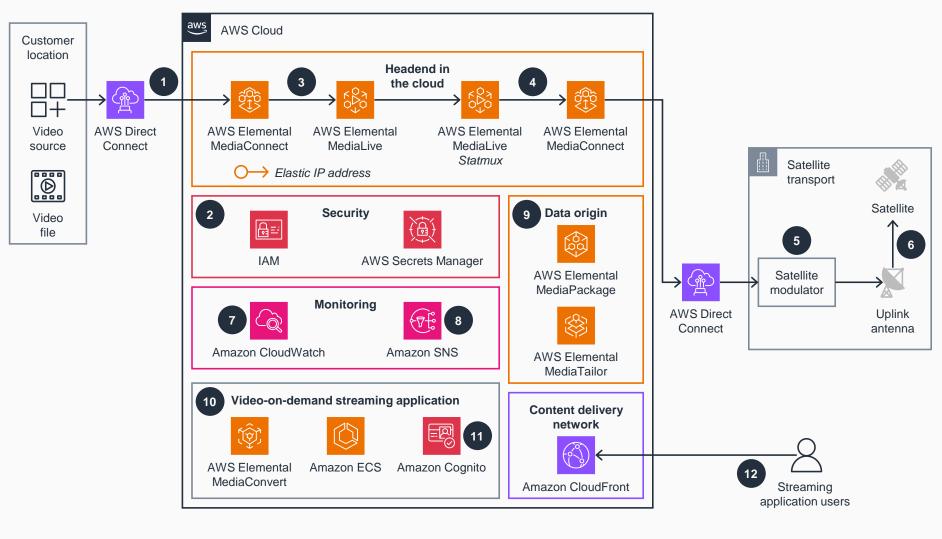# Guidance for Modernizing Video Content Distribution on AWS

This architecture diagram shows how to build a highly reliable, available, scalable, and secure video workflow with AWS managed services, helping you distribute high-quality video content over satellite and the internet.

1. Ingest video streams into AWS using **AWS Direct Connect**. **AWS Elemental MediaConnect** supports multiple streaming protocols and can also be sourced using **MediaConnect** entitlements granted by other AWS accounts. **MediaConnect** supports private Elastic IP addresses from your virtual private cloud.

2. Use **AWS Identity and Access Management (IAM)** roles with appropriate policies, and use **AWS Secrets Manager** to store the passwords to decrypt the video stream.

3. Forward the video stream to **AWS Elemental MediaLive** to transcode the single-program transport stream (SPTS).

4. **Statmux for MediaLive** will create multiple SPTSs and deliver a single multi-program transport stream (MPTS) through **MediaConnect**.

5. Deliver the single MPTS using **Direct Connect** from the AWS Region to the satellite teleport.

6. Uplink the MPTS using Digital Video Broadcast (DVB) standard DVB-S/S2 to the satellite using C-band or Ku band.

7. Monitor the quality of your video streams using customized dashboards on **Amazon CloudWatch**.

8. Configure an alarm threshold to monitor alarms and for any issues. Invoke notifications to be sent to operators using **Amazon Simple Notification Service (Amazon SNS)**.

9. Use **AWS Elemental MediaPackage** and **AWS Elemental MediaTailor** to deliver video on demand over a streaming application.

10. Use **AWS Elemental MediaConvert** to deliver video on demand from **Amazon Simple Storage Service (Amazon S3)**, or run an over-the-top (OTT) streaming application on **Amazon Elastic Container Service (Amazon ECS)** containers.

11. To manage user subscriptions to the OTT streaming service, use **Amazon Cognito** for user authentication and authorization.

12. Use **Amazon CloudFront** to deliver a low-latency, high-speed video viewing experience to users on the streaming application.

AWS Reference Architecture