
AWS
re:Invent

MDS205

Innovate, enhance, and secure OTT and B2B video delivery

Ashley Cutler
Senior Product Manager
AWS Elemental

Matthew Norton
Senior Director of Technology
PBS Digital

AWS re:Invent

© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Agenda

Introduction

Transformation of content distribution using AWS

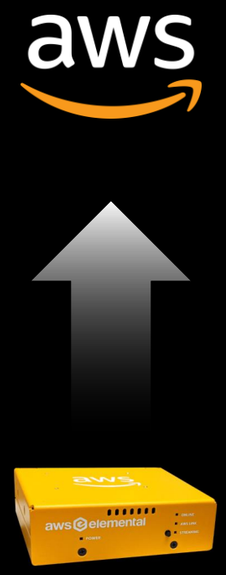
Digital cinema and Deluxe

Member station streaming to PBS viewers



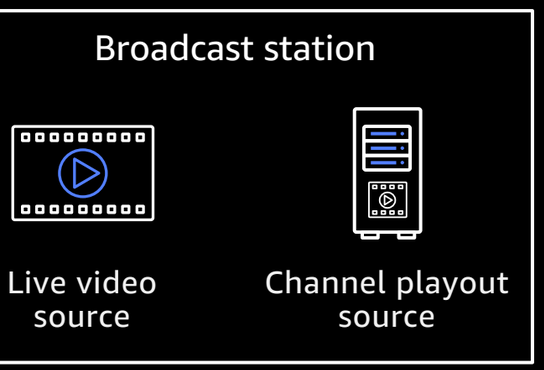
© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

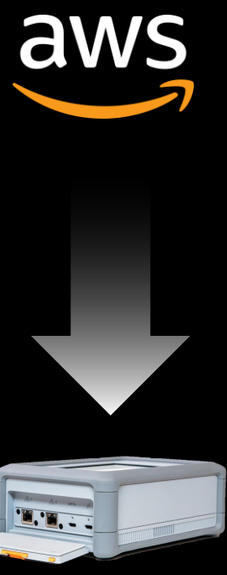
Video means connecting ground to cloud



Connecting video inputs into the cloud

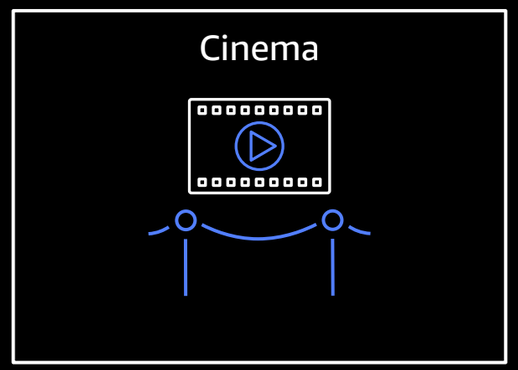
Live, linear broadcast content needs to be transported to the cloud for processing and delivery





Reliable, secure video delivery

Content providers and distributors need secure, cost-efficient, and easy-to-manage methods of delivering media



Deluxe and AWS

Digital cinema distribution

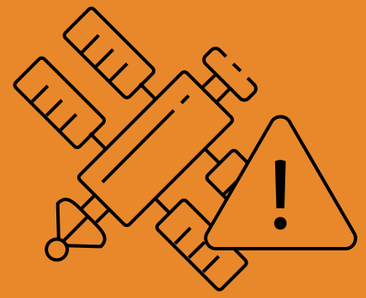


AWS re:Invent

© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

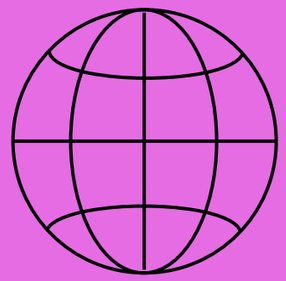
Challenges with cinema content distribution

Inefficient content delivery methods



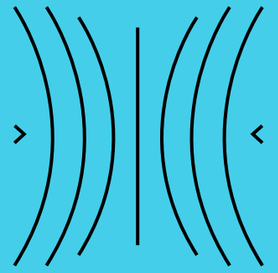
HDD and satellite no longer are sufficient to deliver content fast and reliably on a global scale

Content is now global



Global demand to provide day and date releases, reduce piracy, and unlock accessibility

Content windows are compressing



Rapid turnaround in new content creation and the ability to increase monetization on event-driven catalog

AWS Snowcone

Small, portable, rugged, and secure edge computing and data transfer device for secure content distribution





Benefits:

- Hardened, secure, and highly performant computing outside of the data center suitable for facilities with variable security
- Collect, analyze, and enable local actions faster
- Consistent programming and DevOps model: Develop and test in-cloud, run at the edge
- AWS delivery model: hardware as a service

IP-based distribution with AWS Snowcone

Deluxe digital cinema

Management and delivery of Digital Cinema feature and assets

Content sync

Registration and monitoring

On-site theater / exhibitor

AWS Snowcone

Bi-directional feedback and real-time analytics

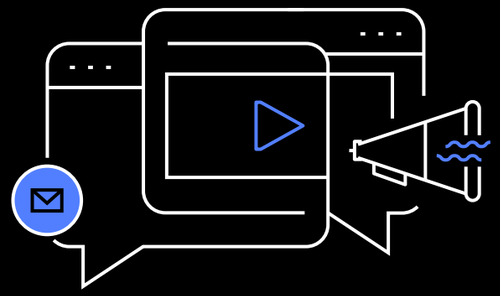
PBS member station streaming to viewers like you



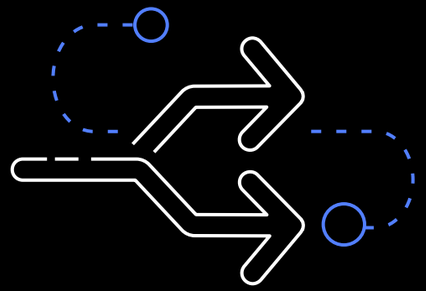
AWS re:Invent

© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

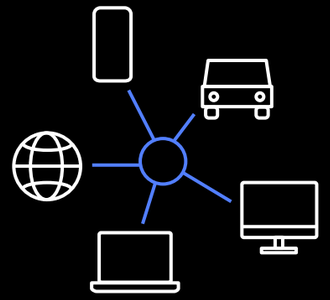
Challenges for local broadcasters



Increased demand for localized content available on any device, as consumers can shift platforms faster than ever

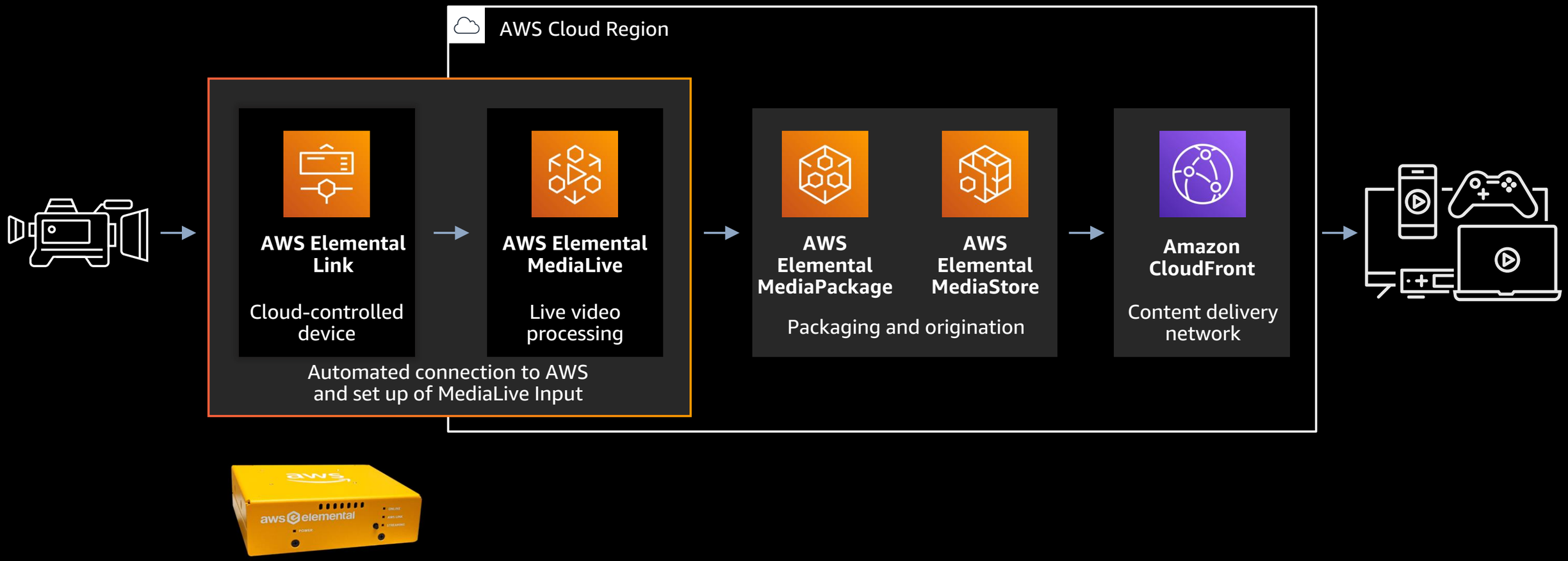


Foundational shift, not just about replacing old hardware with new hardware, but shifting capital expenditure to operational expenditure

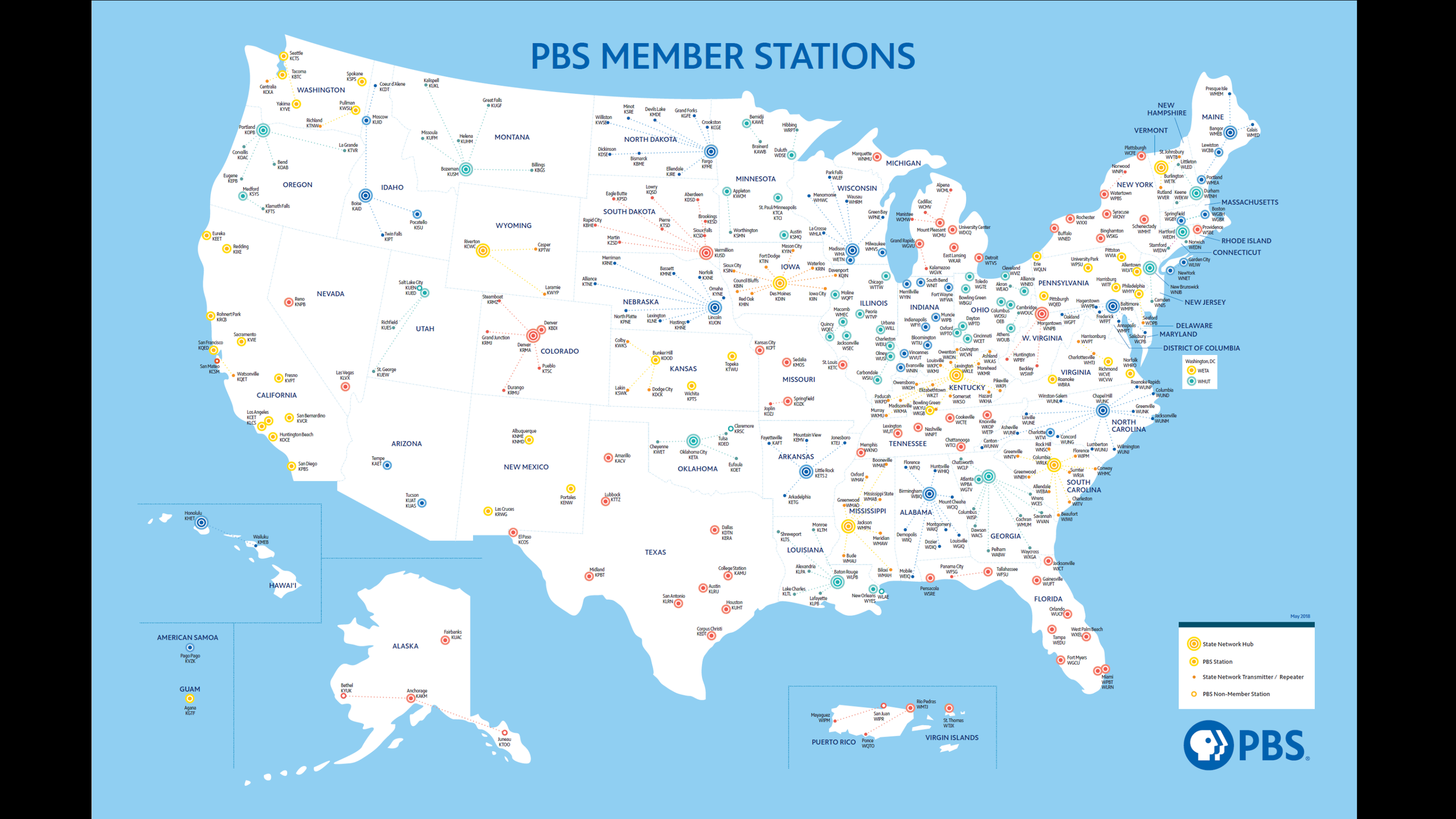


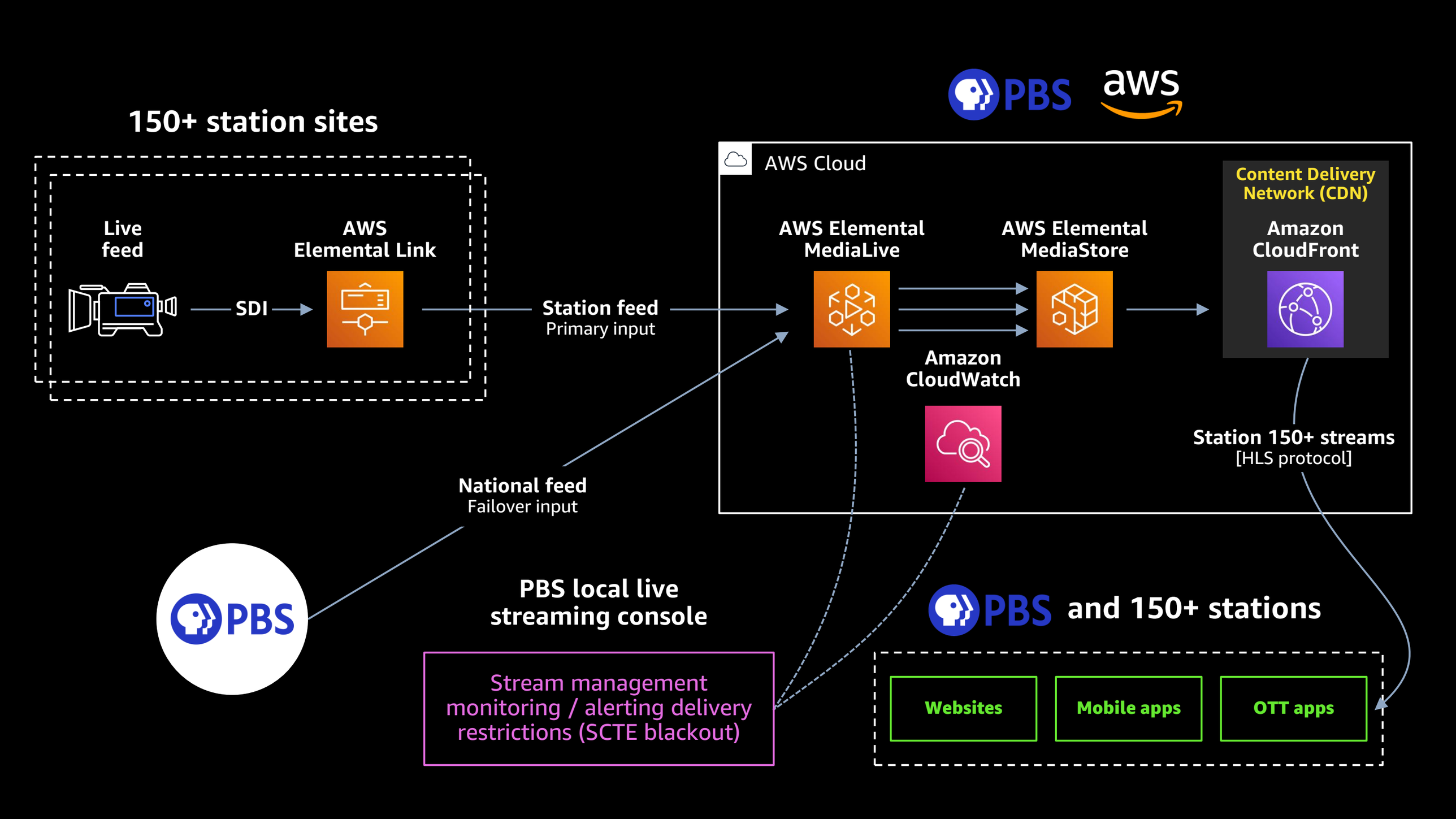
Next-gen distribution with IP as a primary distribution mechanism is increasing to provide increased consumer engagement and reach

AWS Elemental Link

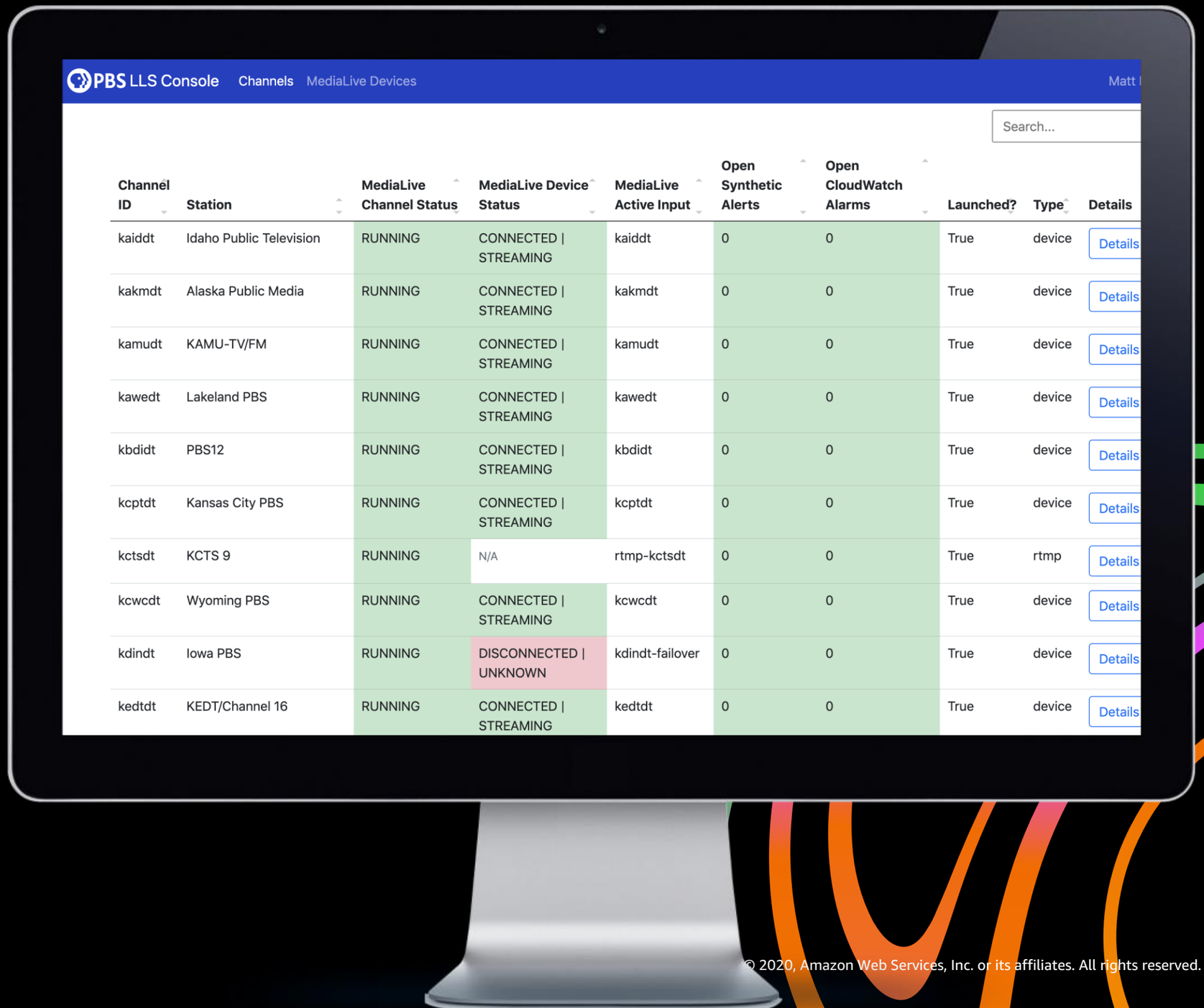


PBS MEMBER STATIONS




150+ station sites
Live feed
SDI
AWS Elemental Link
Station feed
Primary input
AWS Cloud
AWS Elemental MediaLive
AWS Elemental MediaStore
Content Delivery Network (CDN)
Amazon CloudFront
Amazon CloudWatch
Station 150+ streams
[HLS protocol]
National feed
Failover input
PBS local live streaming console
Stream management monitoring / alerting delivery restrictions (SCTE blackout)
PBS and 150+ stations
Websites
Mobile apps
OTT apps

PBS Local Live Streaming management console

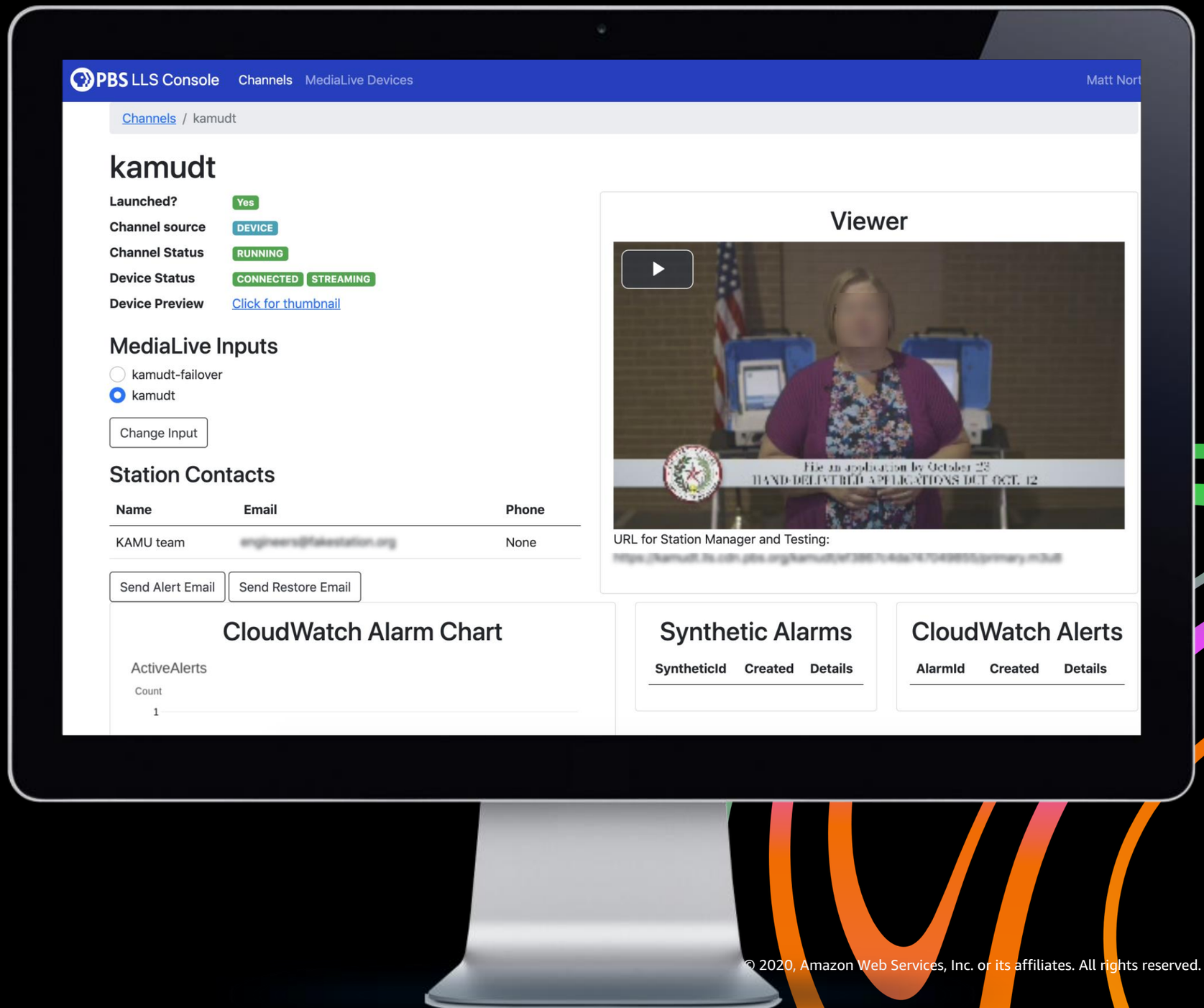


Channel ID	Station	MediaLive Channel Status	MediaLive Device Status	MediaLive Active Input	Open Synthetic Alerts	Open CloudWatch Alarms	Launched?	Type	Details
kaiddt	Idaho Public Television	RUNNING	CONNECTED | STREAMING	kaiddt	0	0	True	device	Details
kakmdt	Alaska Public Media	RUNNING	CONNECTED | STREAMING	kakmdt	0	0	True	device	Details
kamudt	KAMU-TV/FM	RUNNING	CONNECTED | STREAMING	kamudt	0	0	True	device	Details
kawedt	Lakeland PBS	RUNNING	CONNECTED | STREAMING	kawedt	0	0	True	device	Details
kbdidt	PBS12	RUNNING	CONNECTED | STREAMING	kbdidt	0	0	True	device	Details
kcptdt	Kansas City PBS	RUNNING	CONNECTED | STREAMING	kcptdt	0	0	True	device	Details
kctsdt	KCTS 9	RUNNING	N/A	rtmp-kctsdt	0	0	True	rtmp	Details
kcwcdt	Wyoming PBS	RUNNING	CONNECTED | STREAMING	kcwcdt	0	0	True	device	Details
kdindt	Iowa PBS	RUNNING	DISCONNECTED | UNKNOWN	kdindt-failover	0	0	True	device	Details
kedtdt	KEDT/Channel 16	RUNNING	CONNECTED | STREAMING	kedtdt	0	0	True	device	Details

AWS re:Invent

© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

PBS Local Live Streaming management console



© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Detroit Public TV

This week, following enormous work by our partners at PBS, we launched the stream of our main channel. The timing couldn't be better, as we are building a statewide effort around distance learning and a new level of service to arts/culture/community in response to the crisis. The stream will be a critical part of everything we are planning. Lots more to come on our distance learning efforts. Think you'll love what we are building. But, as we head into Labor Day weekend, I wanted to say thanks for your partnership and hard work.

Rich Homberg
President & CEO
Detroit Public TV



© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

KEDT-TV

This week KEDT-TV received our first patron level membership donation from a nice lady in Harlingen in the Rio Grande Valley. That resulted from KEDT extending our streaming services to the Valley. When I call to thank her, she told me how much it meant to her have PBS back in her life and she started listing all of the shows that she is watching now including our local shows. It was clear from our conversation that PBS programming means a lot to her.

We obviously welcomed her generous donation but her positive response and encouragement was just as valuable.

I appreciate your work launching local station streaming.

Don Dunlap
President and General Manager
KEDT



© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Resources

https://aws.amazon.com/blogs/storage/deluxe-enables-same-day-global-theatrical-delivery-using-aws-snowcone/

https://onevzn.bydeluxe.com

https://aws.amazon.com/snowcone

https://pbs.org

https://aws.amazon.com/medialive/features/link

https://aws.amazon.com/media

Thank you!



AWS re:Invent

© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.



Please complete the session survey

AWS re:Invent

© 2020, Amazon Web Services, Inc. or its affiliates. All rights reserved.