



AWS  
re:Invent

**STG404**

# Architecting hybrid cloud media workflows

## **Paul Roberts**

Principal Solutions Architect  
Amazon Web Services

## **Rob Hilton**

Principal Solutions Architect  
Amazon Web Services

# Agenda

Introductions

What are the problems customers face?

How to solve the problem

Service overviews

Demo

Q&A

# Recapping the problem



**Toronto**



**Legacy storage headaches**



**Brazil**



# Unrelenting production schedules

- Amazon, Hulu, and Netflix are making significant production investments
- Time to market is important
- Optimizing the >\$12B spend
- Keep the pipelines full

## 29 Netflix Projects Currently In Development

BY JONATHAN FIGUEROA - ON JUL 05, 2018 IN LISTS



The powerhouse of video streaming is dominating the entertainment industry, and they still have so much in store for binge-watchers. Whether it's primetime dramas, comic book serials, crime documentaries, or the latest movies, Netflix is constantly adding new content to its service.

## How Amazon Studios is growing its global presence

BY JEREMY KAY | 3 APRIL 2018



Amazon Studios' strategy is about working with its global distribution partners — not competing against them. Head of international distribution and strategic initiatives Matt Newman discusses the company's innovative models.



SOURCE: AMAZON STUDIOS  
"THE BIG SICK"

Amazon Studios has been expanding its global footprint. Since it began fully financing features several years ago, the company has built up its Prime Video streaming platform, largely underpinned by robust relations with the world's top international theatrical distributors.

January 14, 2018

## HULU EXPANDS ORIGINALS SLATE AND ANNOUNCES NEW CONTENT DEALS AT TELEVISION CRITICS ASSOCIATION PRESS TOUR

Uncategorized

HULU EXPANDS ORIGINALS SLATE AND ANNOUNCES NEW CONTENT DEALS AT TELEVISION CRITICS ASSOCIATION PRESS TOUR

*Hulu Confirms Order for Catch-22 Limited Series Event from George Clooney, Paramount Television and Anonymous Content*

*All 15 Seasons of Emmy® Award-winning and Fan Favorite Series ER make Streaming Debut on Hulu in New Agreement with Warner Bros. Domestic Television Distribution*

*Premium Streaming Service Reveals Premiere Dates for Second Season of Emmy® and Golden Globe Award-winning Series The Handmaid's Tale and Final Season of Critically Acclaimed Comedy Casual, as well as a New Installment of Peabody Award-winning Series National Treasure*

# What are the production challenges?

- Productions being treated like small startups—limited IT expertise
- Geographically dispersed creative teams with tight timelines
- Editorial takes weeks to get access to content
- Performance, capacity, connectivity, and portability



# How to solve the problem with AWS



# Solving the problem



**Toronto**

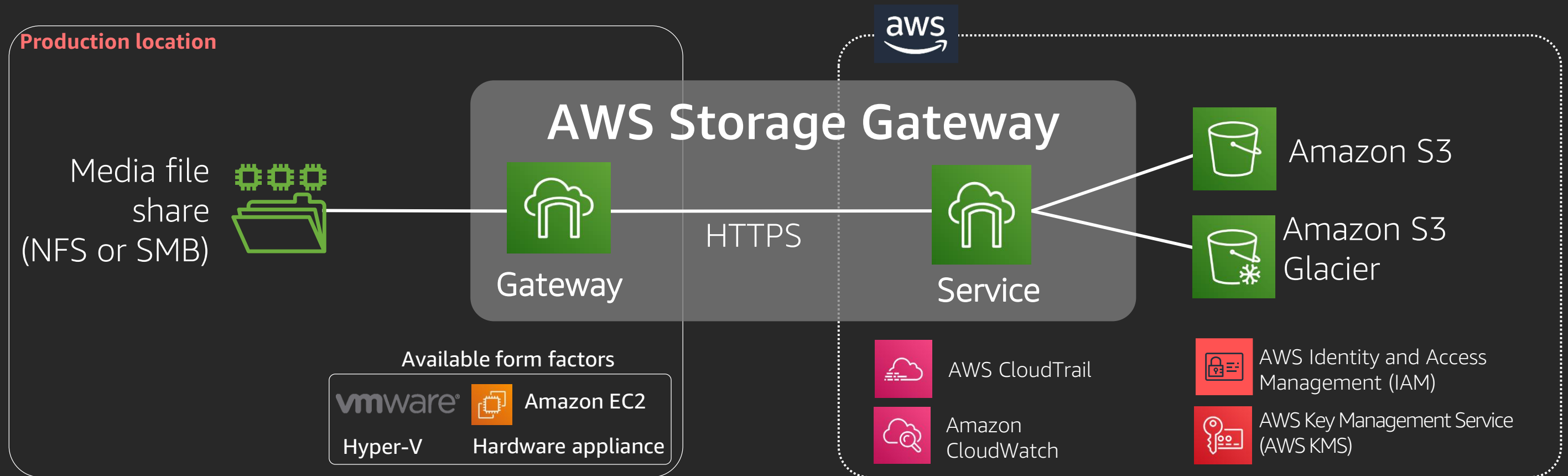
## AWS Storage Gateway



**Brazil**



# Storage Gateway architecture



## Storage Gateway provides applications

- Protocol conversion and device emulation
- Caching (read-through/write-back)
- Optimized data transfer

## Native storage in AWS

- Objects in Amazon Simple Storage Service (Amazon S3) file
- Archives in Amazon S3 Glacier

# Two Storage Gateway options

Gateway requirements  
<https://amzn.to/2ONsqzE>

## Virtual appliance



### Hyper-V



### Amazon EC2

- Four virtual processors assigned to the VM
- 16 GiB of reserved RAM assigned to the VM
- 80 GiB of disk space for installation of VM image and system data

**Note: These are minimum VM specifications**

## Physical appliance



- 2x Intel Xeon Silver 4114 2.20 GHz processors with 10 cores each,
- 128 GB DDR4 RAM
- 5.4 TB of usable enterprise SSD storage
- 3 years of hardware support from Dell EMC—accessed and coordinated through your normal AWS support channels

# AWS Storage Gateway hardware appliance



**The AWS Storage Gateway hardware appliance provides a hybrid storage service that enables your on-premises production media workflows to seamlessly use AWS Cloud storage**



# Global storage editorial workflow



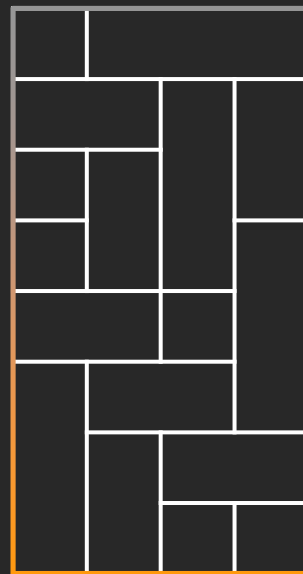
- 1 Artist in Atlanta is performing editorial work on media assets that are uploaded to S3 by Storage Gateway
- 2 After refresh cache, files are visible to applications in Vancouver

Local cache improves access performance

# Development transformation at Amazon: 2001–2002

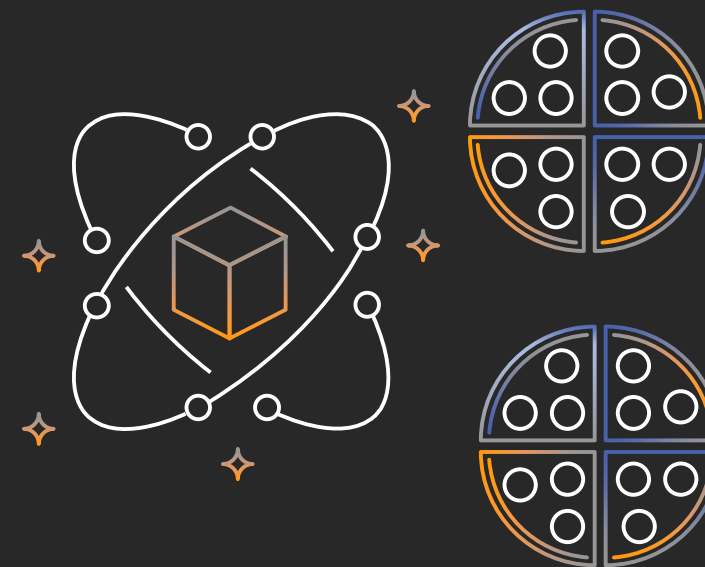
Lesson learned: **decompose for agility**

**2001**



Monolithic application  
+ teams

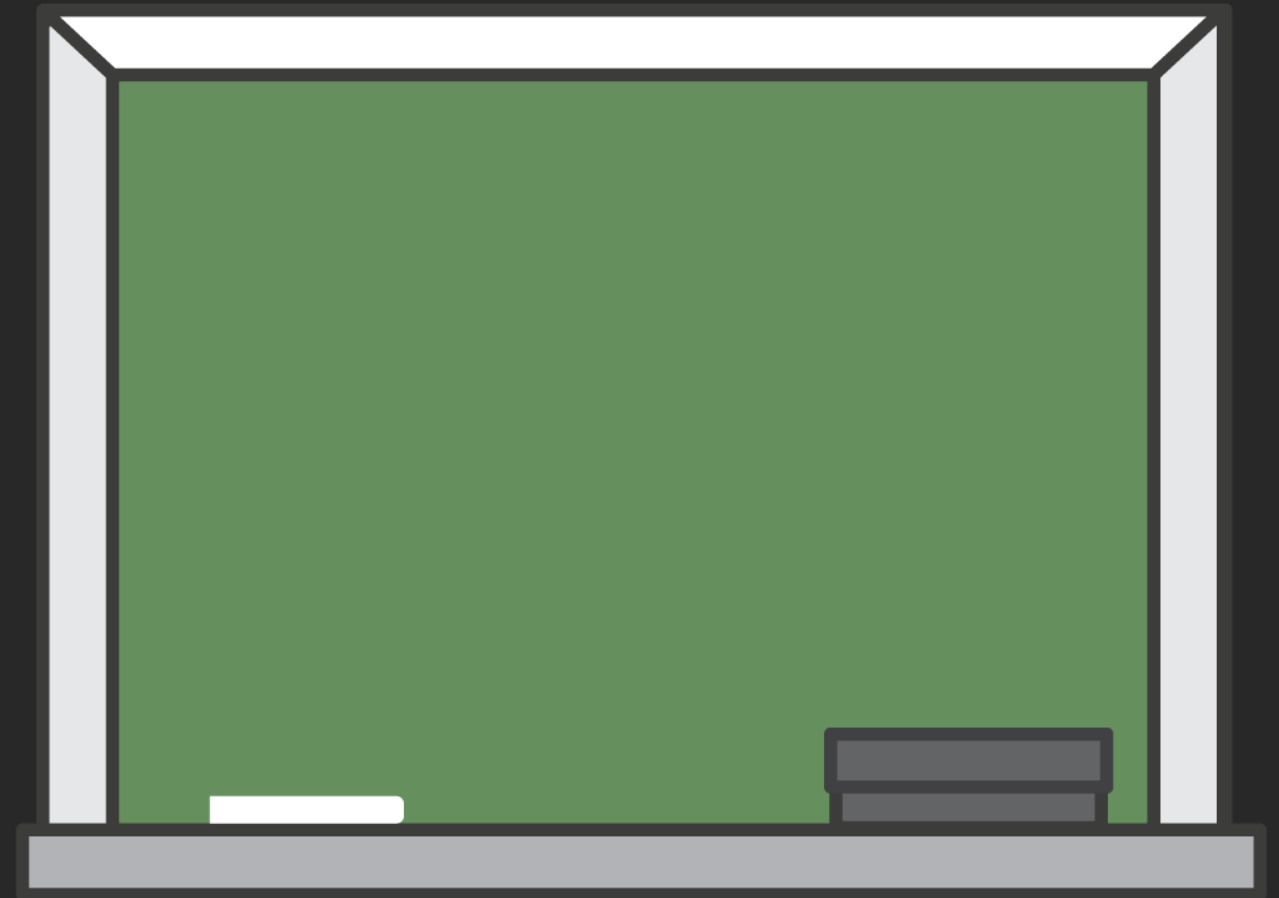
**2002**



Microservices  
+ 2 pizza teams

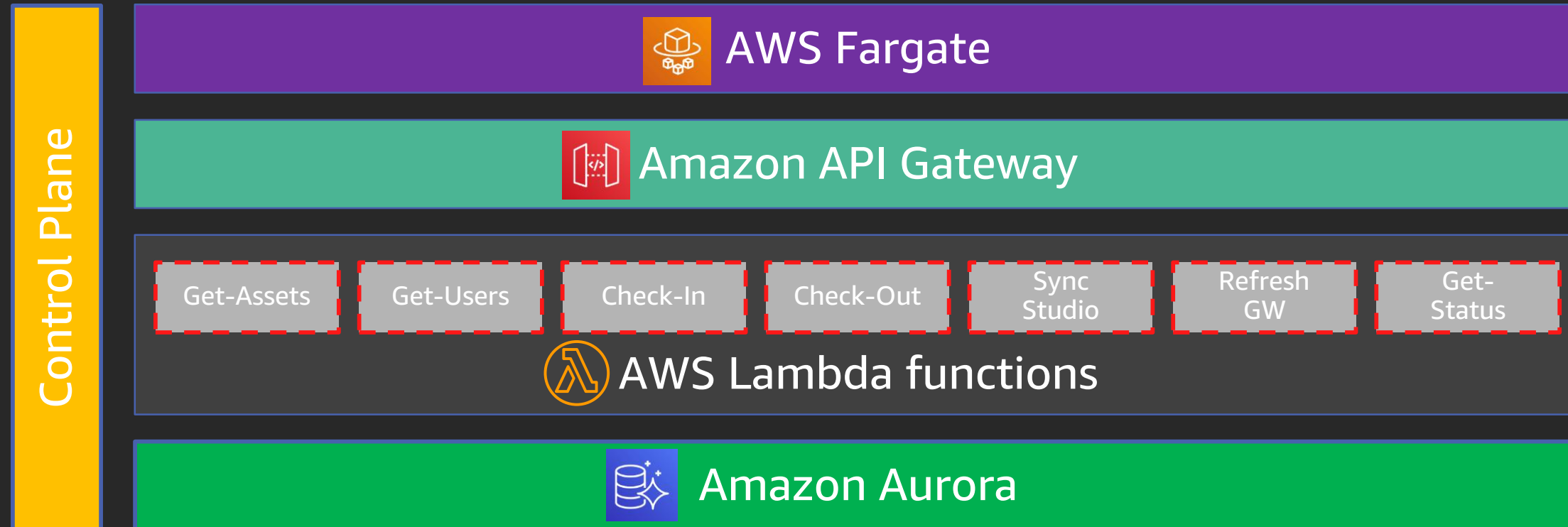
# What is the demo going to show?

- Storage Gateway
- AWS Directory Service
- Amazon S3
- Persisting state with Amazon Aurora
- Amazon API Gateway
- AWS Lambda
- Amazon EC2 GPU instance w/video editing suite

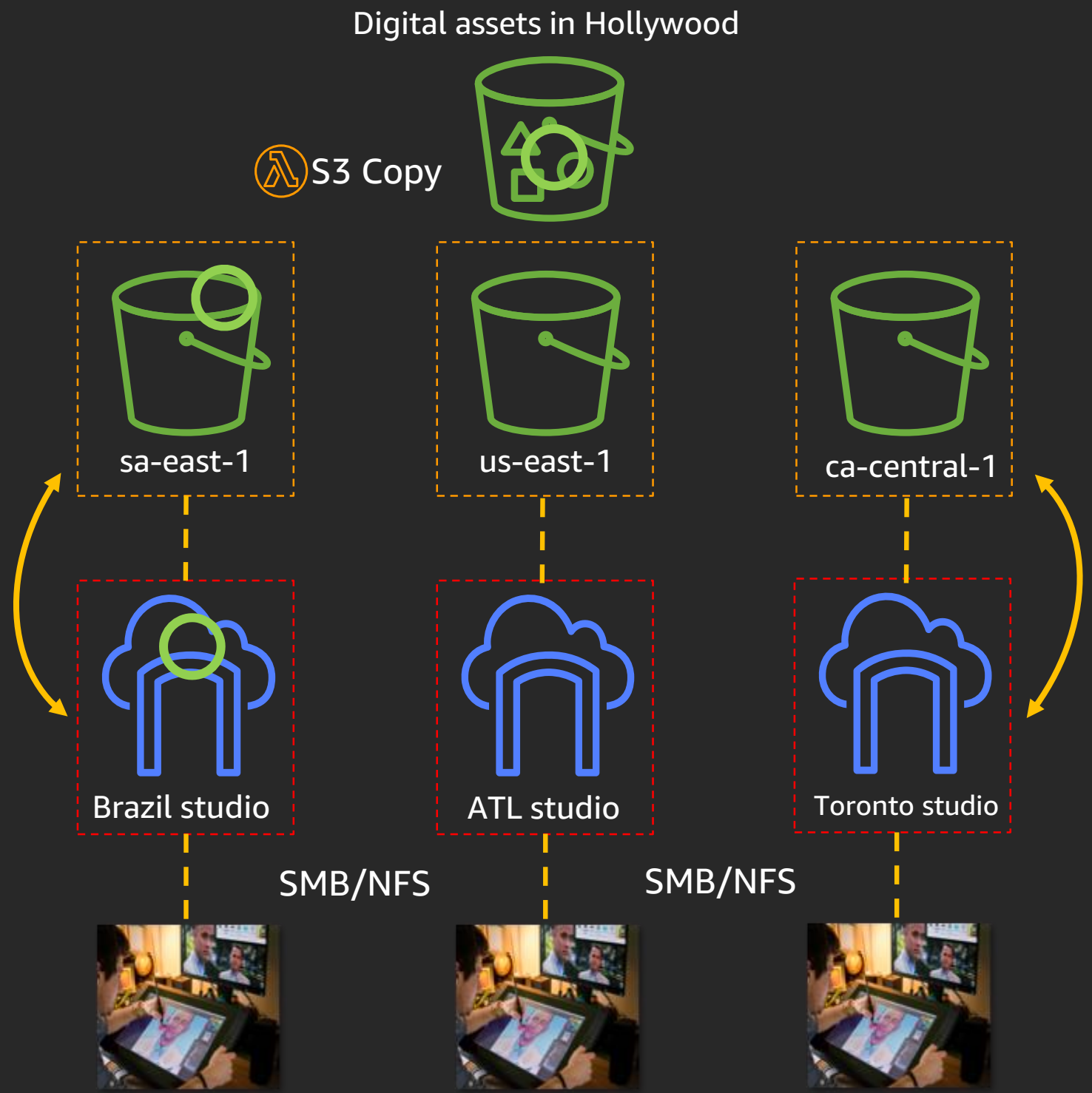




# Global storage control plane

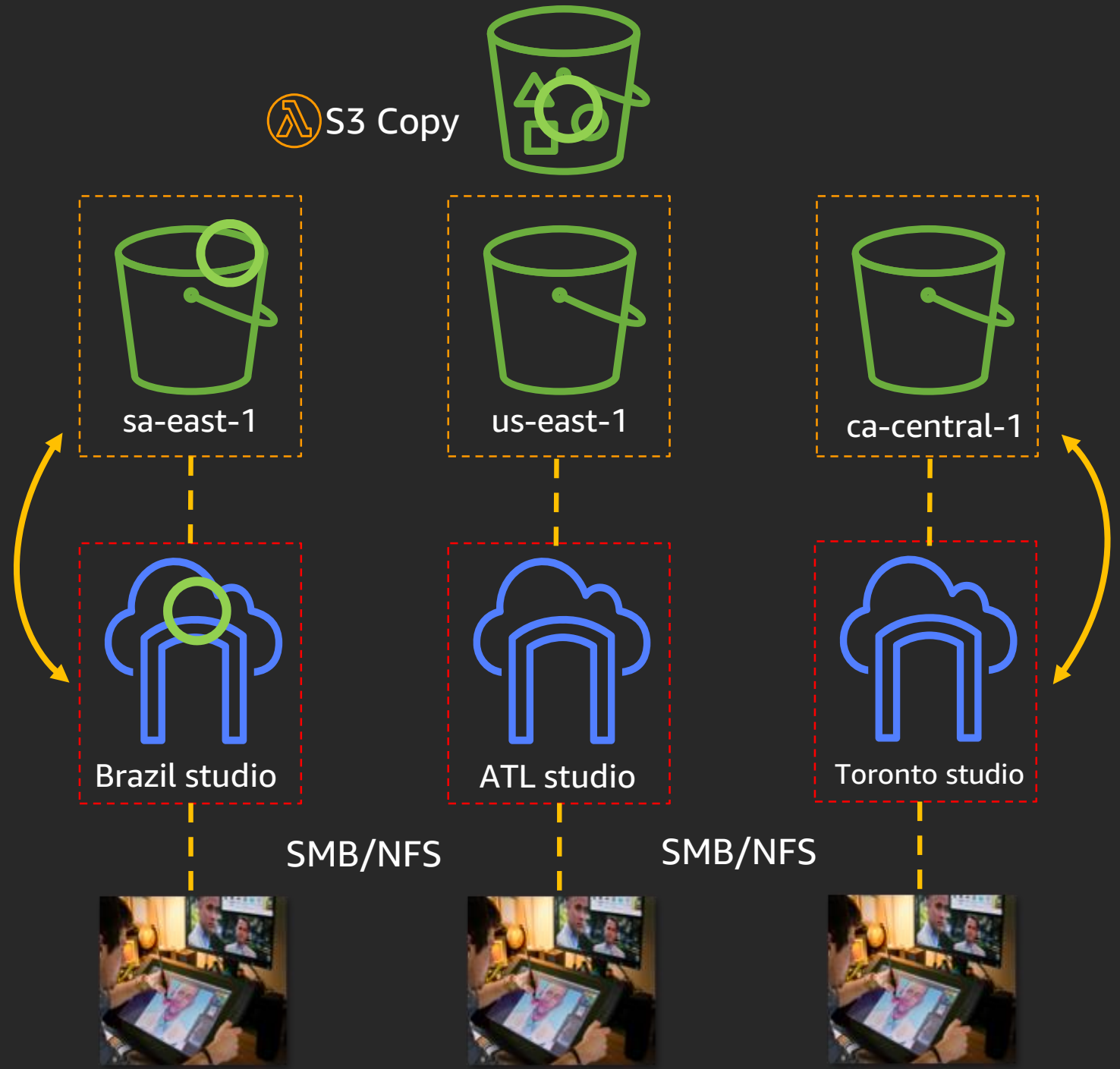


# Global storage checkout



# Global storage check-in

Digital assets in Hollywood



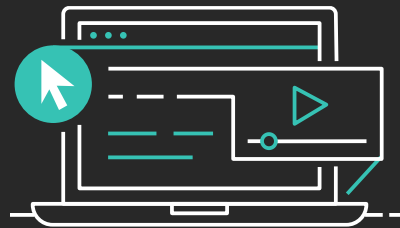


# Demo

# What would you like to build today?

# Learn storage with AWS Training and Certification

Resources created by the experts at AWS to help you build cloud storage skills



45+ free digital courses cover topics related to cloud storage, including:

- Amazon S3
- AWS Storage Gateway
- Amazon S3 Glacier
- Amazon Elastic File Storage (Amazon EFS)
- Amazon Elastic Block Storage (Amazon EBS)



Classroom offerings, like Architecting on AWS, feature AWS expert instructors and hands-on activities

Visit [aws.amazon.com/training/path-storage/](https://aws.amazon.com/training/path-storage/)



# Thank you!



Please complete the session  
survey in the mobile app.