
AWS
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EUC309

Choosing an Amazon AppStream 2.0 fleet to reduce costs & optimize experience

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Agenda

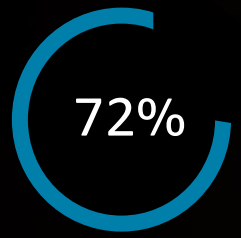
- Hybrid momentum and IT challenges
- AWS End User Computing
- Amazon AppStream 2.0 overview
- Cost vs. user experience
- Optimize end user experience without impacting your budget
- Questions and discussion

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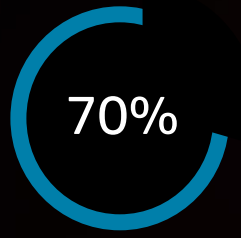
Enabling hybrid work creates IT challenges

Hybrid momentum

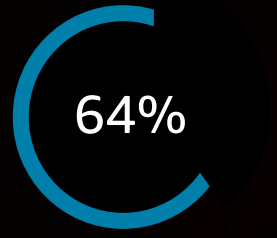
Percent of US executives planning investment to support hybrid working



Tools for virtual collaboration



Infrastructure for secure virtual connectivity



Training for managers to manage a more virtual workspace

Source: PwC Remote Work Survey, January 2021

Challenges



Scalability

- **Quick response to business needs**



End user experience

- Easy onboarding



Security

- IP and data protection
- Compliance mandates



Organization

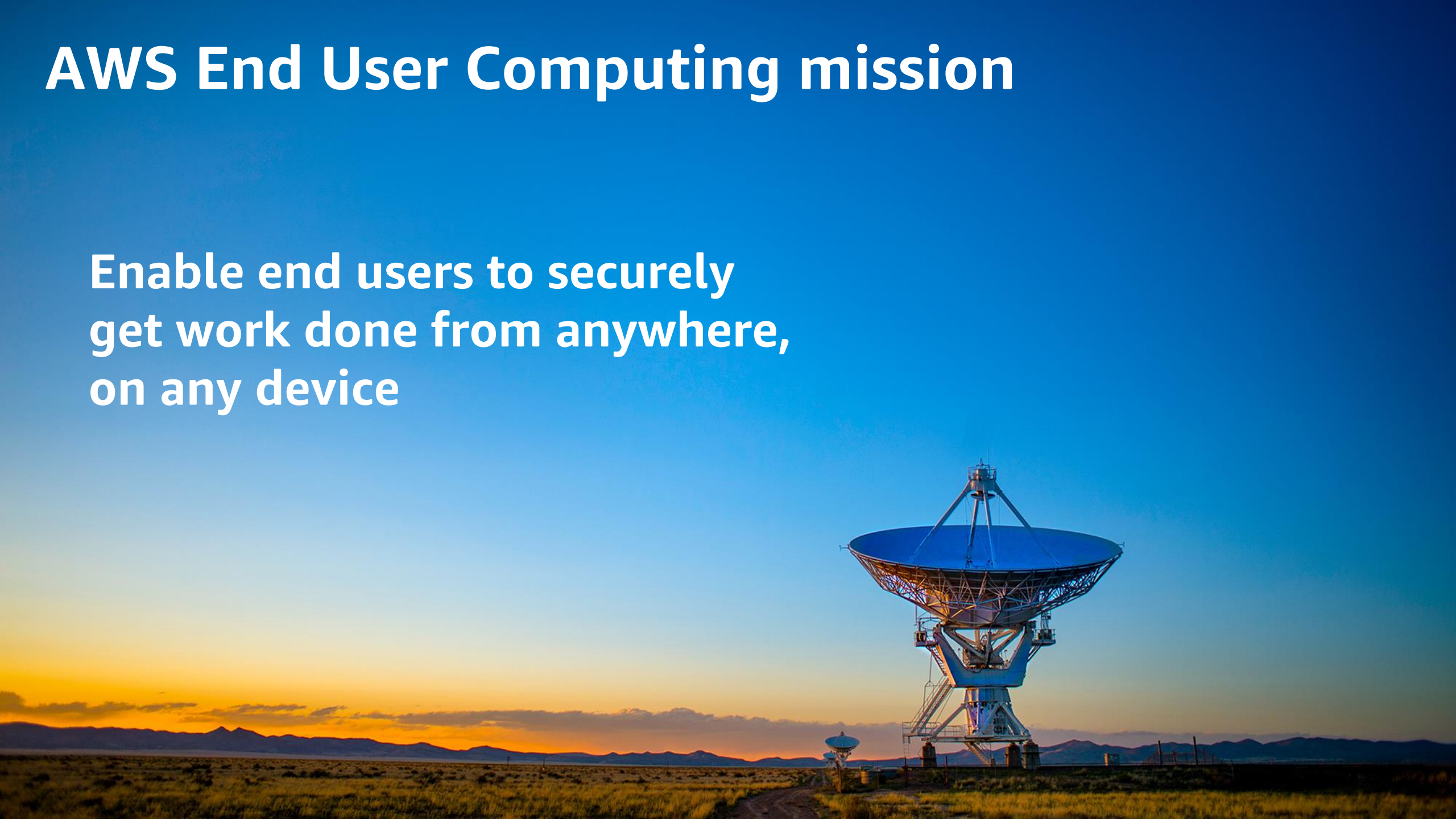
- Lack of expertise
- Limited budget

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AWS End User Computing mission

Enable end users to securely get work done from anywhere, on any device

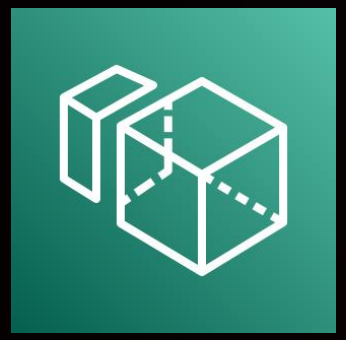


End User Computing portfolio



Amazon AppStream 2.0

Secure, reliable, and scalable access to applications and virtual desktops with selective persistence



Amazon WorkSpaces

Secure, reliable, and scalable access to fully persistent desktops



Amazon WorkSpaces Core

Infrastructure-only solution for 3rd-party VDI management software



Amazon WorkSpaces Web

Secure browser-based access to internal websites and SaaS apps

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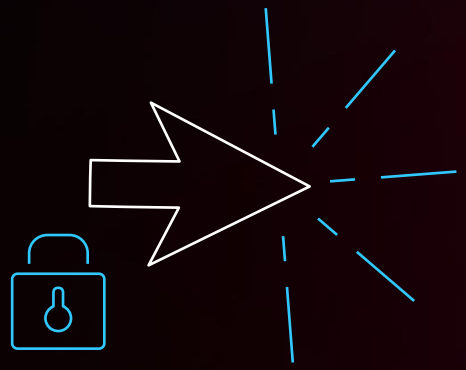
- ✓ Fully managed
- ✓ Selective persistence
- ✓ Low cost
- ✓ Application streaming/SaaS conversion

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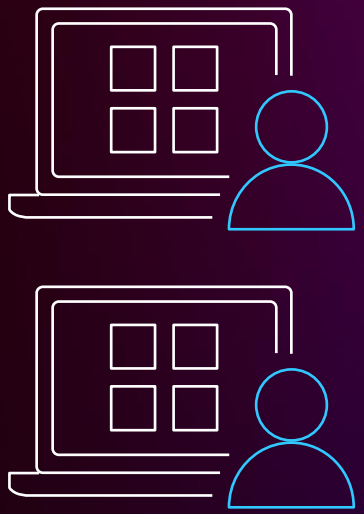
AppStream 2.0 overview



Co-located compute, graphics, apps, data



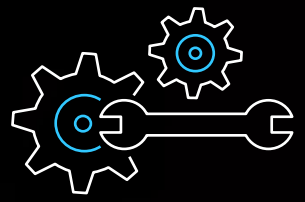
Encrypted pixel stream (AES 256 encryption)



Users

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AppStream 2.0 benefits



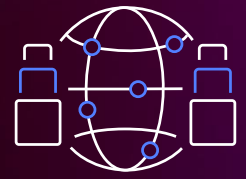
Fully managed

Provisions & manages all resources for app streaming



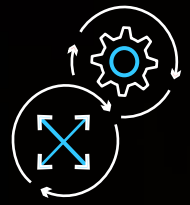
No refactoring

Launch SaaS offering without rewriting application



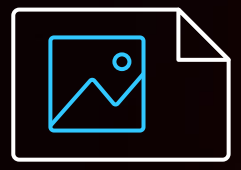
Scale on demand

Scale to any number of users across the globe



Flexible hardware types

Standard, compute, memory, and graphics instance types



Apply your branding

Simply apply your logos or build a fully immersive experience



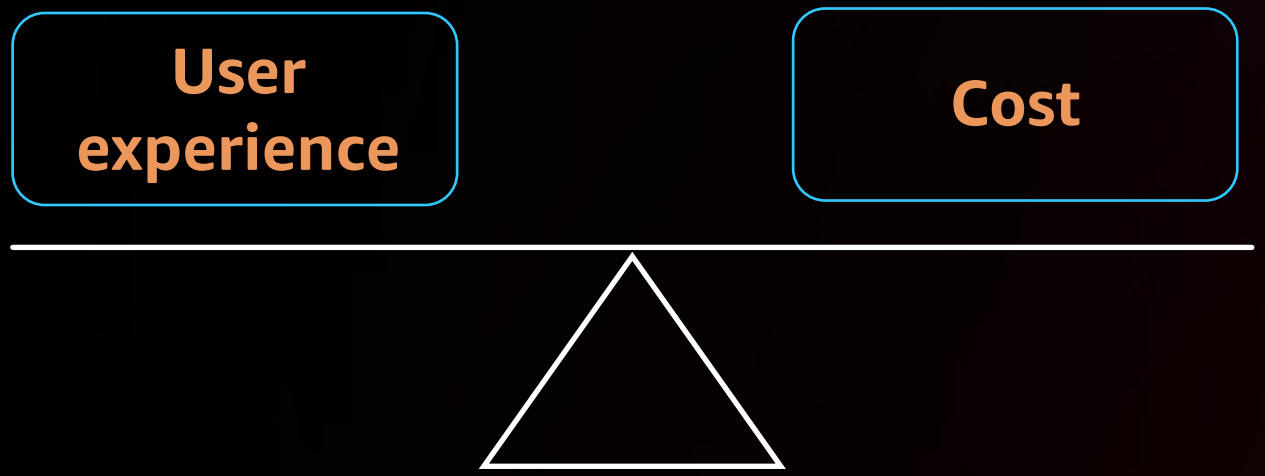
Pay as you go

Pay only for what you use, when you use it

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Finding the right balance



- Fleet deployment
- Scaling policies
- Compute options
- Operating systems
- Geographic locations

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Fleet deployment options

	Description	Use cases	Pricing
 Always on	• Instant connection • Standby instances are running • Optimized for instant-on experience	ISVs and enterprises requiring instant startup • Test labs • Trials & demos	• Windows: per hour • Linux: per second
 On demand	• Applications launch ~2 min • Standby instances are powered off • Optimized for cost	Use cases where cost savings are critical and usage is predictable • Classroom/labs • Contact center	• Windows: per hour • Linux: per second • Small hourly fee for powered-off instances
 Elastic	• AWS managed pool of streaming instances • No standby capacity to pay for • No need to manage OS images	Scenarios where utilization is unpredictable • Webinars • Trainings • Game days	• Windows: per second • Linux: per second

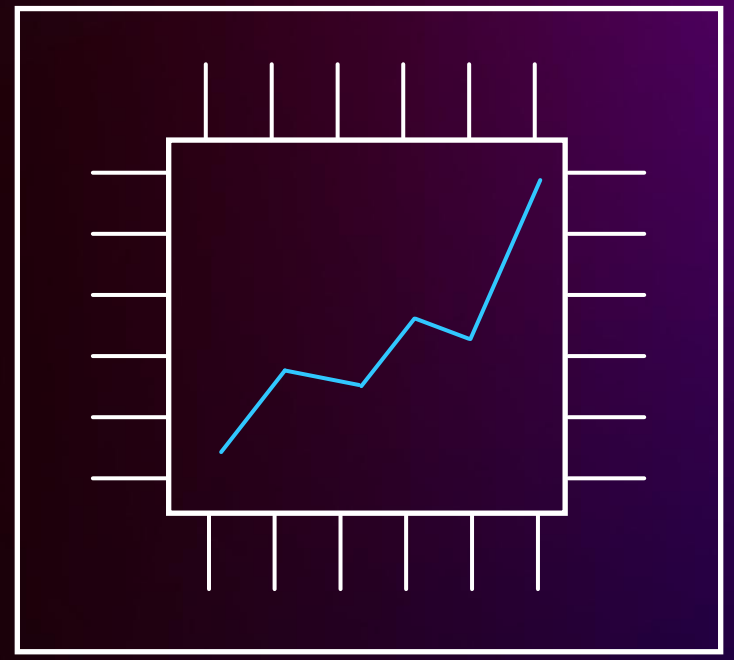
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Optimize streaming instances using scaling policies

Apply scaling policy based on:

- Capacity utilization
- Insufficient capacity errors
- Schedule
- Target tracking

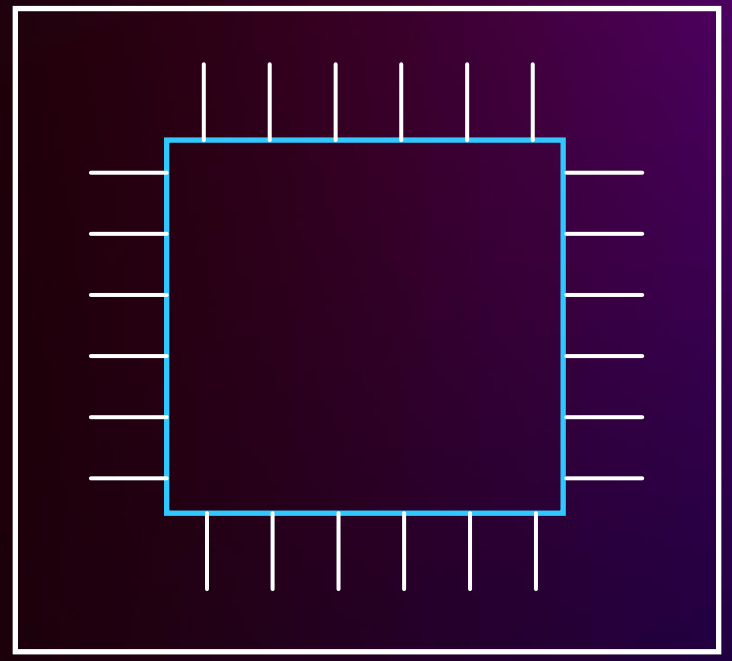


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AppStream 2.0 compute options

- **General purpose**
  - Balance of compute, memory, networking resources
- **Compute optimized**
  - Ideal for compute-bound applications
- **Memory optimized**
  - Fast performance for workloads that process large data sets in memory
- **Graphics**
  - Accelerate machine learning inference and graphics-intensive workloads



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Operating system options

	Microsoft	Linux
Version	• Windows Server 2012 R2 • Windows Server 2016 • Windows Server 2019	• Amazon Linux 2
Hourly pricing	• Starting at $0.075* / hour	• Starting at $0.059* / hour
Additional fees	• Microsoft Remote Desktop Services (RDS) Subscriber Access License (SAL) $4.19 / user / month • $0.44 for Edu customers • $0.00 for BYOL	• None

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*AWS Region: us-east-1

Stream from optimal location

13 GEOGRAPHICAL REGIONS: PRICES MIGHT VARY REGION TO REGION

AppStream 2.0 Regions

GovCloud (US)
US-West

US West
Oregon

US East
N. Virginia
Ohio

Canada
Central

Europe
Frankfurt
Ireland
London

Asia Pacific
Singapore
Sydney
Tokyo
Seoul
Mumbai



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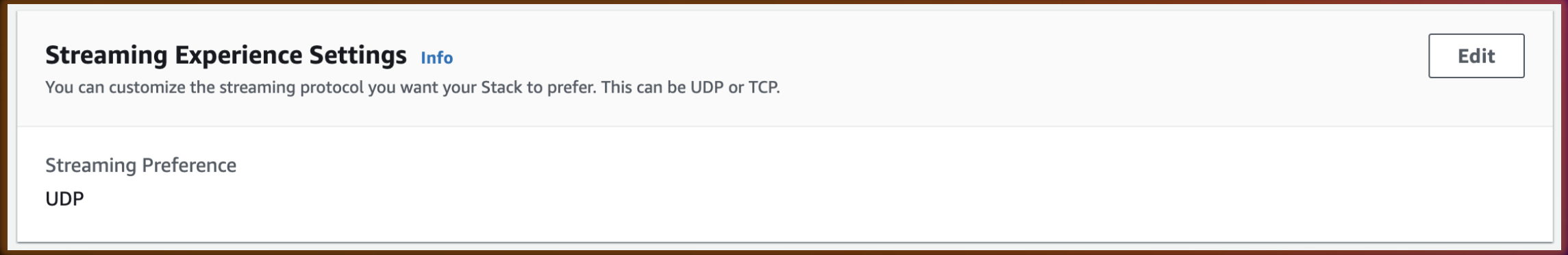
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Optimize end user experience without impacting budget

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TCP vs. UDP

Enable UDP for better streaming performance



- UDP traffic on port 8433
- Available on AppStream 2.0 native client
- Fall back to streaming over TCP

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Native client vs. browser client

NATIVE CLIENT OFFERS ADDITIONAL FUNCTIONALITIES TO BOOST END USER EXPERIENCE



Connect 2+ monitors



Keyboard shortcuts



Connect 4K monitor



Webcam for video conferencing



Use USB devices



Printer support

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Other optimization options



Session scripts



Applications settings persistence



Group policies



Domain joined



Application optimization



SAML IdP

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End user computing: other track sessions

Type	Code	Level	Day / Time	Title	Speakers
Chalk talks	EUC 312	300	11/30, 2:30p – 3:30p	Securing end user computing workloads on AWS end user computing services	Michael Matts
	EUC 308	300	11/30, 5:30p – 6:30p	Best practices for migrating on-premises VDI workloads to the cloud	Phil Persson
	EUC 301 – R1	300	12/01, 11:45a – 12:45p	Securely stream AWS workloads to your remote workers	Andrew Morgan, Ariel Fu
Workshops	EUC 304	300	11/30, 11:30a – 1:30p	Enable secure access to private resources with Amazon WorkSpaces Web	Spencer DeBrosse, Grant Joslyn
	EUC 306 – R1	300	11/30, 3:15p – 5:15p	Getting started with Amazon WorkSpaces	Dave Jaskie
Builders	EUC 313 – R1	300	11/30, 4:00p – 5:00p	Building streaming applications using Amazon AppStream 2.0 Elastic fleets	Don Scott
Theater	EUC 001	NA	11/30, 2:30p – 2:50p	Maximize employee experience with Amazon WorkSpaces & AppStream 2.0	Stephen Stetler
	EUC 002	NA	11/30, 3:00p – 3:20p	Modernize your virtual desktop infrastructure with Amazon WorkSpaces	Andrew Kloman

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Learn more about AWS End User Computing

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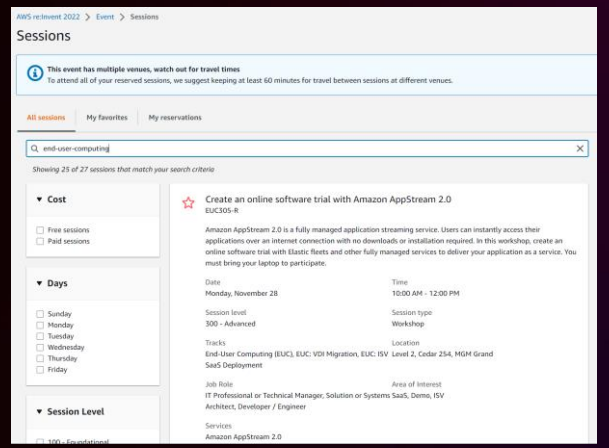
AWS End User Computing Reception

November 30, 2022 | 6:00PM - 9:00PM PST

Electra Cocktail Club, 3325 South Las Vegas Boulevard, Las Vegas, NV 89109

bit.ly/3hMzcVB

Visit the EUC re:Invent session catalog



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Thank you!

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