

AWS re:Invent

NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

EUC306-R

Getting started with Amazon WorkSpaces

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AWS



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Amazon WorkSpaces workshop agenda

Brief WorkSpaces service overview

Lab: Getting started with Amazon WorkSpaces

Conclusion and cleanup

Please take breaks as needed



Getting started with this workshop

- As a participant, you will have access to an AWS account with any optional pre-provisioned infrastructure and IAM policies needed to complete this workshop.
- The AWS account will only be available for the duration of this workshop. You will lose access to the account thereafter.
- The optional pre-provisioned infrastructure will be deployed to a specific AWS Region. Check your workshop content to determine whether other Regions will be used.
- Be sure to review the terms and conditions of the event. Do not upload any personal or confidential information in the account.

Step 1: Sign in with your preferred method

<https://catalog.workshops.aws/join>



aws workshop studio

Workshop Studio > Sign in

Sign in

Choose a preferred sign-in method

Email one-time password (OTP)

Enter your personal or corporate email to receive a one-time password

Login with Amazon

Login with your Amazon.com retail account

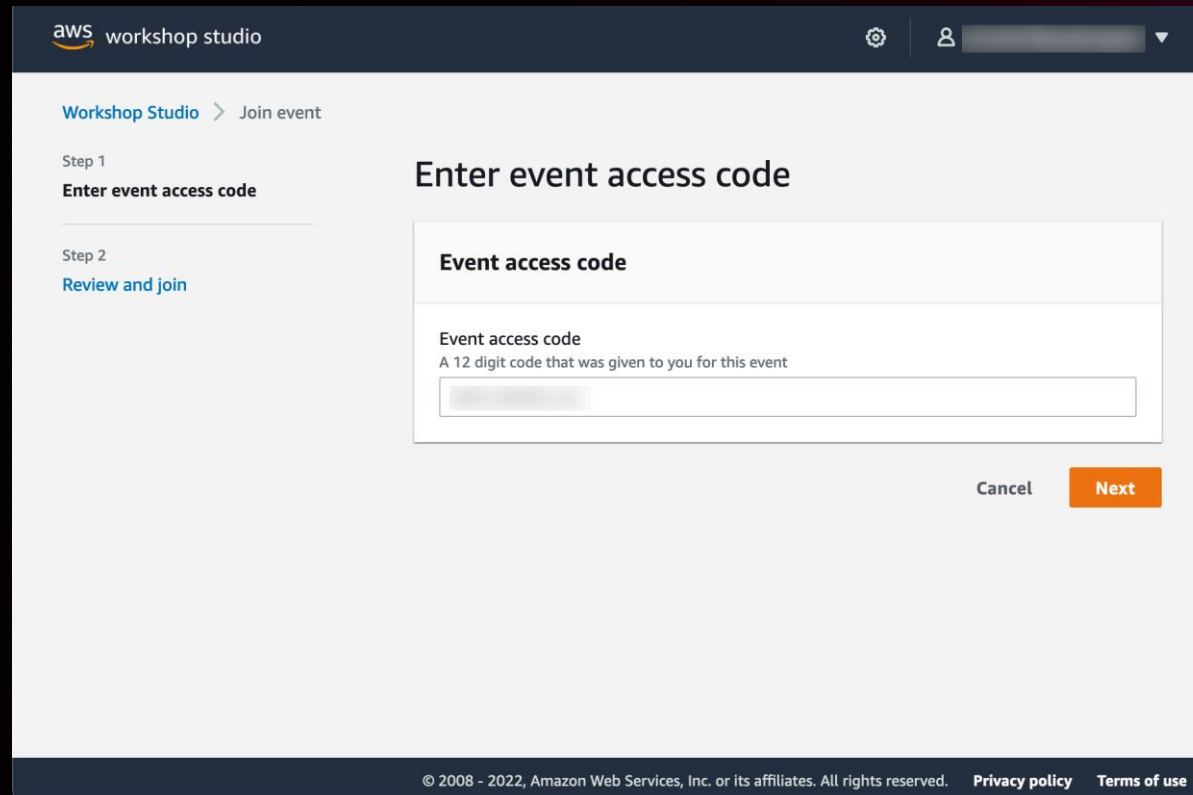
Amazon employee

Login with your Amazon Corporate account. Only for Amazon Employees.

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Step 2: Enter event access code

Enter 12-digit event access code: 82d6-035d38-ce



The screenshot shows the AWS Workshop Studio interface. At the top, there's a header with the AWS logo and 'workshop studio' text. Below this, a breadcrumb trail shows 'Workshop Studio > Join event'. The main content area is titled 'Enter event access code'. On the left, there's a sidebar with 'Step 1 Enter event access code' (highlighted) and 'Step 2 Review and join'. The main area contains a form titled 'Event access code' with a description: 'Event access code A 12 digit code that was given to you for this event'. Below this is a text input field. At the bottom right of the form, there are 'Cancel' and 'Next' buttons. The footer contains copyright information: '© 2008 - 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.' and links to 'Privacy policy' and 'Terms of use'.

aws workshop studio

Workshop Studio > Join event

Step 1
Enter event access code

Step 2
Review and join

Enter event access code

Event access code



Event access code
A 12 digit code that was given to you for this event

Cancel Next

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Step 3: Review terms and join event

aws workshop studio



Workshop Studio > Join event

Step 1
[Enter event access code](#)

Step 2
Review and join

Review and join

Event details

Name	Start time	Duration	Level
AWS General Immersion Day	9/23/2022 01:13 AM	12 hours	-

Description
AWS General Immersion Day

Terms and Conditions

Read and accept before joining the event

1. By using AWS Workshop Studio for the relevant event, you agree to the AWS Event Terms and Conditions and the AWS Acceptable Use Policy. You acknowledge and agree that are using an AWS-owned account that you can only access for the duration of the relevant event. If you find residual resources or materials in the AWS-owned account, you will make us aware and cease use of the account. AWS reserves the right to terminate the account and delete the contents at any time.
2. You will not: (a) process or run any operation on any data other than test data sets or lab-approved materials by AWS, and (b) copy, import, export or otherwise create derivate works of materials provided by AWS, including but not limited to, data sets.
3. AWS is under no obligation to enable the transmission of your materials through Event Engine and may, in its discretion, edit, block, refuse to post, or remove your materials at any time.
4. Your use of AWS Workshop Studio will comply with these terms and all applicable laws, and your access to AWS Workshop Studio will immediately and automatically terminate if you do not comply with any of these terms or conditions.

☒ I agree with the Terms and Conditions

Cancel

Previous

Join event

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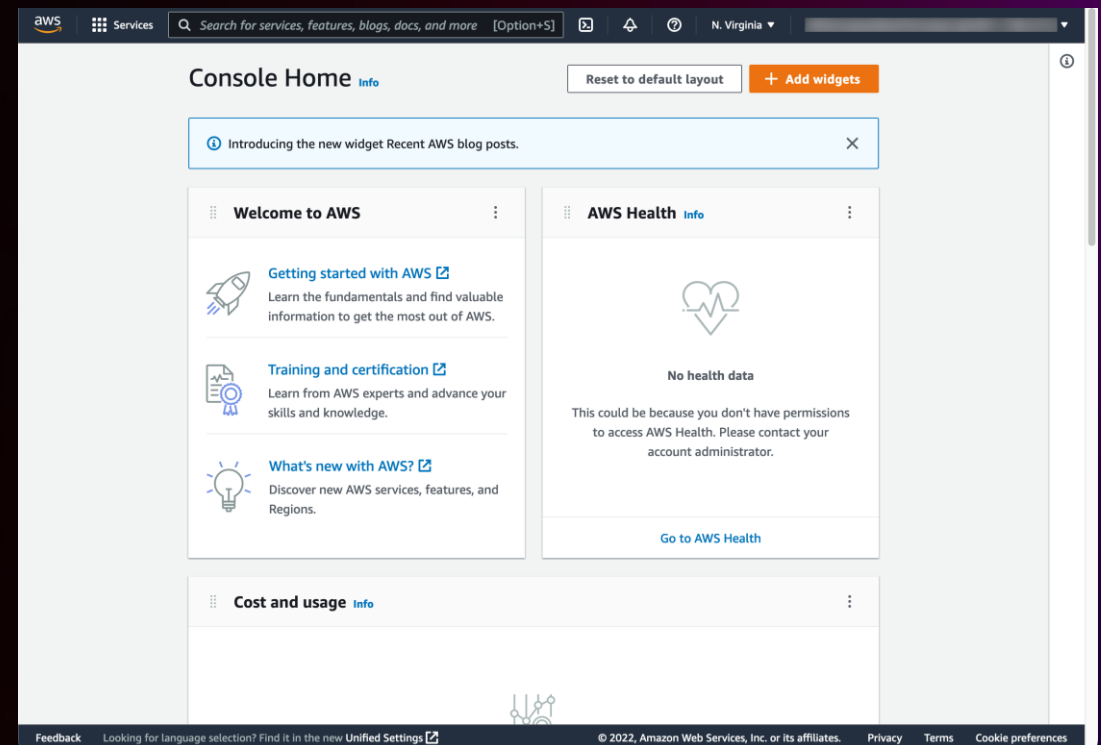
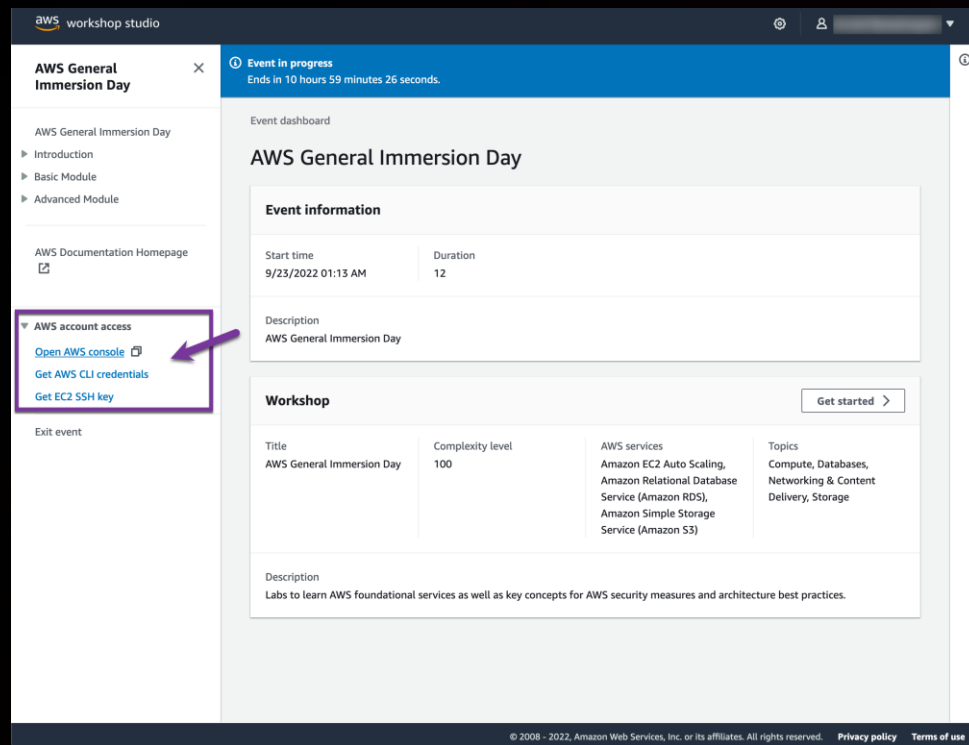
[Privacy policy](#)

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Step 4: Access AWS account

Access the AWS console or generate AWS CLI credentials as needed



Step 5: Get started with the workshop

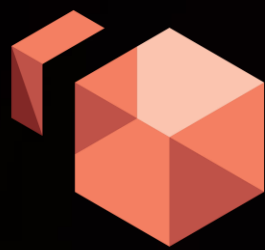
The screenshot shows the 'Event dashboard' for the 'AWS General Immersion Day' workshop. The left sidebar contains navigation links: 'AWS General Immersion Day' (with sub-links for Introduction, Basic Module, and Advanced Module), 'AWS Documentation Homepage', 'AWS account access' (with links for 'Open AWS console', 'Get AWS CLI credentials', and 'Get EC2 SSH key'), and 'Exit event'. The main content area displays 'Event information' (Start time: 9/23/2022 01:13 AM, Duration: 12) and 'Workshop' details (Title: AWS General Immersion Day, Complexity level: 100, AWS services: Amazon EC2 Auto Scaling, Amazon Relational Database Service (Amazon RDS), Amazon Simple Storage Service (Amazon S3), Topics: Compute, Databases, Networking & Content Delivery, Storage). A 'Get started' button is located at the bottom right of the workshop details, highlighted by a purple arrow.



The screenshot shows the 'Workshop' content for the 'AWS General Immersion Day' workshop. The left sidebar is identical to the previous screenshot. The main content area features a large graphic of a helmet with the text 'IMMERSION DAYS' below it. Below the graphic, there is a paragraph of text: 'In this General Immersion Day workshop, through a mix of service explanation and hands-on labs led by AWS, you will learn about AWS foundational services as well as key concepts for AWS security measures and architecture best practices. The hands-on labs are largely divided into **basic and advanced modules**. In basic modules, you can learn various features of each AWS foundational service. In advanced modules, you can learn how to connect each service organically to create architecture like 3-tier web application.' At the bottom right, there are 'Previous' and 'Next' buttons.

Brief service overview





amazon

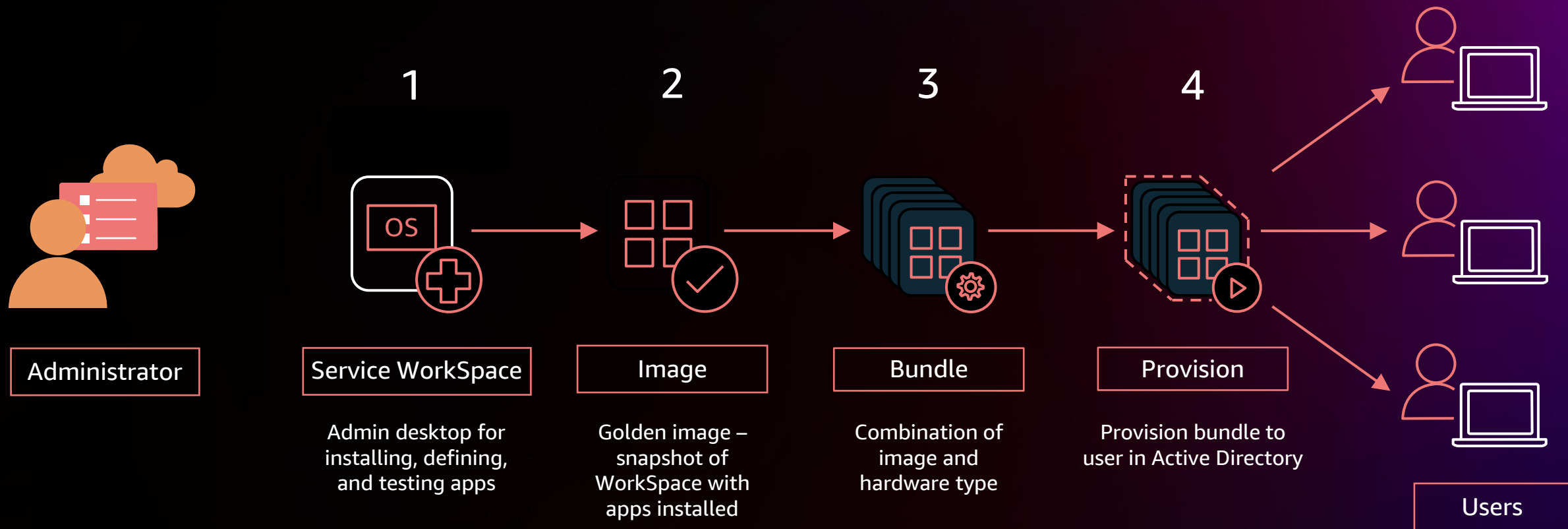
WorkSpaces

Fully managed

Fully persistent

All-inclusive virtual desktop

WorkSpaces workshop workflow



Create your WorkSpace



Amazon WorkSpaces family of solutions

WorkSpaces (fully persistent session)

AppStream 2.0 (selective persistence)

All-inclusive virtual desktop services

WorkSpaces Core

Virtual desktop infrastructure APIs for customers' third-party VDI software

WorkSpaces Web

Secure browser service for access to internal websites and SaaS apps

Managed infrastructure

Secure

Reliable

Scalable / Pay-as-you-go

User and management interface

AWS console and client

Third-party VDI software

Secure, browser-only

Configurability

CPU, memory, storage, GPU-accelerated config options

>300 enterprise policies



“Managed” makes a difference

Solution stack	AWS End User Computing services			
	On-premises VDI	DIY cloud VDI	Amazon WorkSpaces Core	Amazon WorkSpaces, AppStream 2.0, WorkSpaces Web
Image management	○	○	○	WorkSpaces Web only
Directory services and policies	○	○	○	○
VDI control plane install and admin	○	○	Customer or partner	✓
Host admin	○	○	✓	✓
Storage admin	○	○	✓	✓
Load balancers install and admin	○	✓	✓	✓
Hypervisor install and admin	○	✓	✓	✓
Physical security	○	✓	✓	✓
Power/HVAC	○	✓	✓	✓
Rack and stack	○	✓	✓	✓

- Customer or partner managed
- ✓ AWS managed

Amazon WorkSpaces users

Choice of operating system and configuration to support a broad range of use cases



Modern workforce

Enable digital distributed workforce with fully functional desktops and fast onboarding/offboarding



BYOD users

Keep sensitive corporate data off BYODs while taking advantage of cost savings and flexibility associated with personally owned devices



Developers

Give developers the choice of tools they need to quickly build/test/deploy code across multiple environments within AWS



Compute-intensive workloads

Provide data CPU/GPU accelerated desktops on demand – paying only for what you need



Remote learning

Build flexible virtual learning environments for students and educators

Amazon WorkSpaces

Fully managed, fully persistent, **all-inclusive** virtual desktop solutions

Everything you need to enable cloud-based VDI at scale – with flexible configurations and support for **Ubuntu Desktop**, **Amazon Linux**, and **Microsoft Windows**

Agility



- Rapidly scale with changing business needs
- Choose the operating system and config that meet the needs of each end user

Productivity



- Centralized/consistent toolset streamlines fleet management
- AWS scale puts resources close to end user, maximizing performance

Security



- Apps/data reside in the AWS Cloud, not on end-user devices
- Desktop streaming is encrypted

Reliability



- Fully managed services with 99.9% uptime SLA

Cost



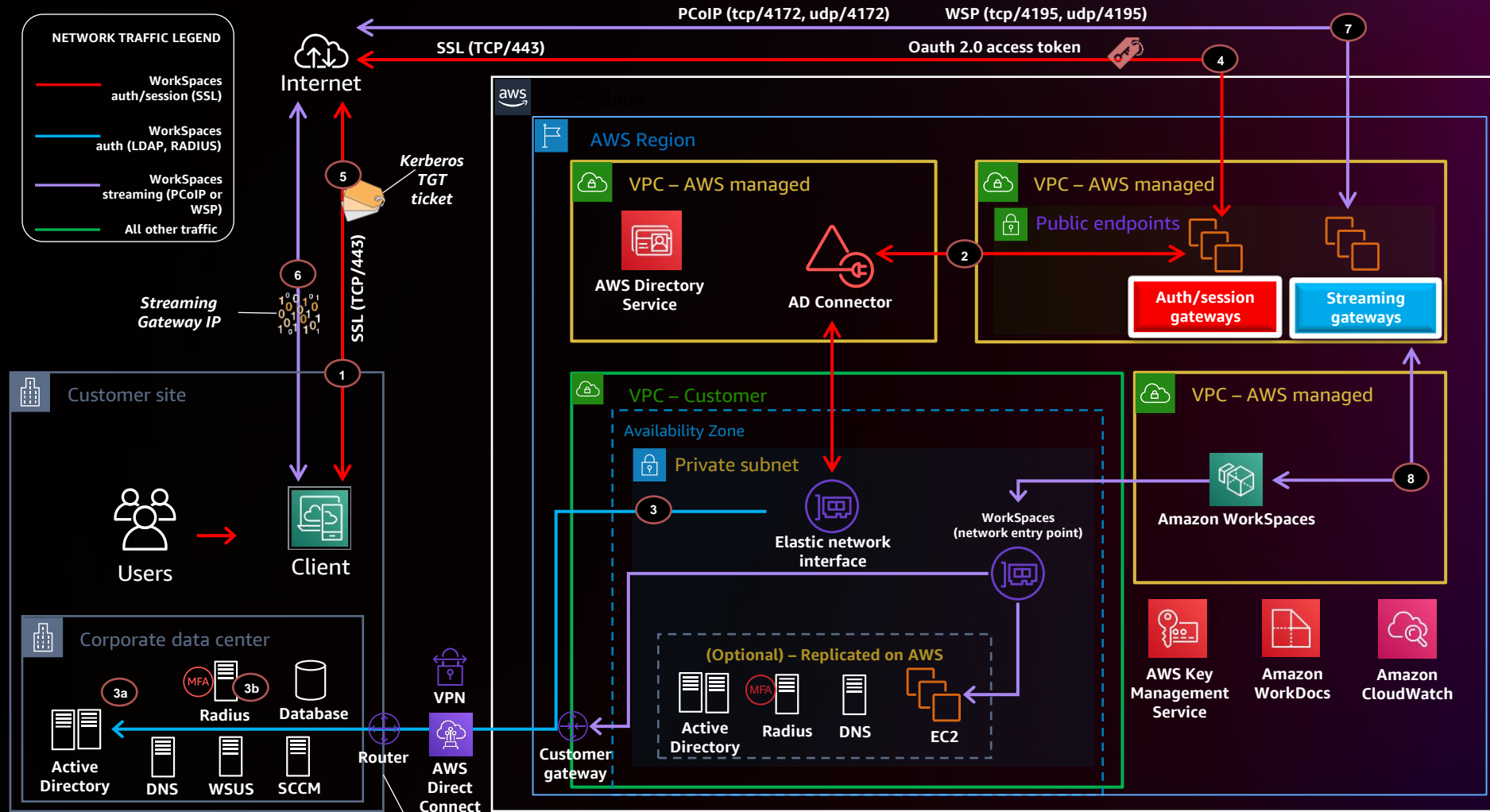
- Fixed-rate pricing with no upfront costs or hidden charges
- Pay-as-you-go billing (hourly or monthly)
- Auto scaling prevents over provisioning

Stream from the nearest location

	WorkSpaces
US East (N. Virginia)	X
US West (Oregon)	X
AWS GovCloud (US-West)	X
Canada (Central)	X
Europe (Frankfurt)	X
Europe (Ireland)	X
Europe (London)	X
Asia Pacific (Mumbai)	X
Asia Pacific (Seoul)	X
Asia Pacific (Singapore)	X
Asia Pacific (Sydney)	X
Asia Pacific (Tokyo)	X
South America (São Paulo)	X
AWS China (Ningxia)	X



Amazon WorkSpaces architecture



Firewall must allow ingress traffic from AD Connector and WorkSpaces to AD DS

Pricing

22 preconfigured Windows and 20 Amazon Linux server bundles*

7 BYOL (Windows and Office) on dedicated hardware configurations *, **

Always-on or auto-stop

Billing monthly and hourly

*Microsoft Office Pro Plus add-on available with Windows bundles for additional fee

**Bring your own license (BYOL) minimum 100 WorkSpaces required, Windows VDA license required; Microsoft Office Pro Plus can optionally be included for additional WorkSpaces fee



Amazon WorkSpaces running modes

Monthly (always-on)

- Fixed monthly fee
- Best for workers that use as primary desktop

Hourly (auto-stop)

- Small fixed fee + hourly charge
- Good for workers that require part-time access
- May cost more than monthly fee

Cost Optimizer for Amazon WorkSpaces



Automatic
WorkSpace
conversion



One-click
deployment

WorkSpaces operating system choice

Amazon Linux 2

Amazon Linux 2 LTS

Microsoft Windows

Windows BYOL

- Windows 10

Windows 10 desktop experience

- Windows Server 2016
- Windows Server 2019

Ubuntu

Ubuntu Desktop 22.04 LTS

- Ubuntu Pro benefits

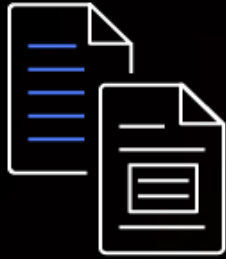
Pre-configured & BYOL bundles

Value	Standard	Performance	Power	PowerPro	Graphics G4dn	GraphicsPro G4dn
1 vCPU 2 GB memory 80-175 GB root volume 10-100 GB user volume	2 vCPU 4 GB memory 80-175 GB root volume 10-100 GB user volume	2 vCPU 7.5 GB memory 80-175 GB root volume 10-100 GB user volume	4 vCPU 16 GB memory 80-175 GB root volume 10-100 GB user volume	8 vCPU 32 GB memory 80-175 GB root volume 10-100 GB user volume	4 vCPU 16 GB memory 100 GB root & user volumes 125 GB local storage 1 GPU 16 GB video memory	16 vCPU 64 GB memory 100 GB root & user volumes 225 GB local storage 1 GPU 16 GB video memory
\$25 Monthly or \$0.22 Hourly	\$33 Monthly or \$0.30 Hourly	\$45 Monthly or \$0.47 Hourly	\$70 Monthly or \$0.68 Hourly	\$127 Monthly or \$1.53 Hourly	\$537 Monthly or \$1.54 Hourly	\$959 Monthly or \$11.16 Hourly

- Volumes configurable both at provisioning time or post provisioned up to 2TB
- Hardware bundle switching post deployment (requires reboot)



Admin features



Persistent desktop



Control data movement



Multi-monitor



Apply your own
branding



Manage by APIs



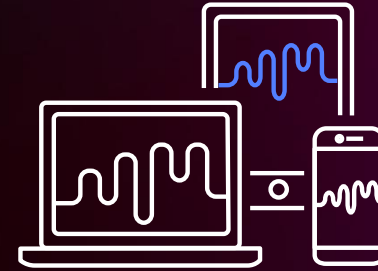
Easy provisioning

Streaming protocols



PCoIP

- iPad, Android, or Linux clients
- Teradici zero client devices
- GPU-based bundles

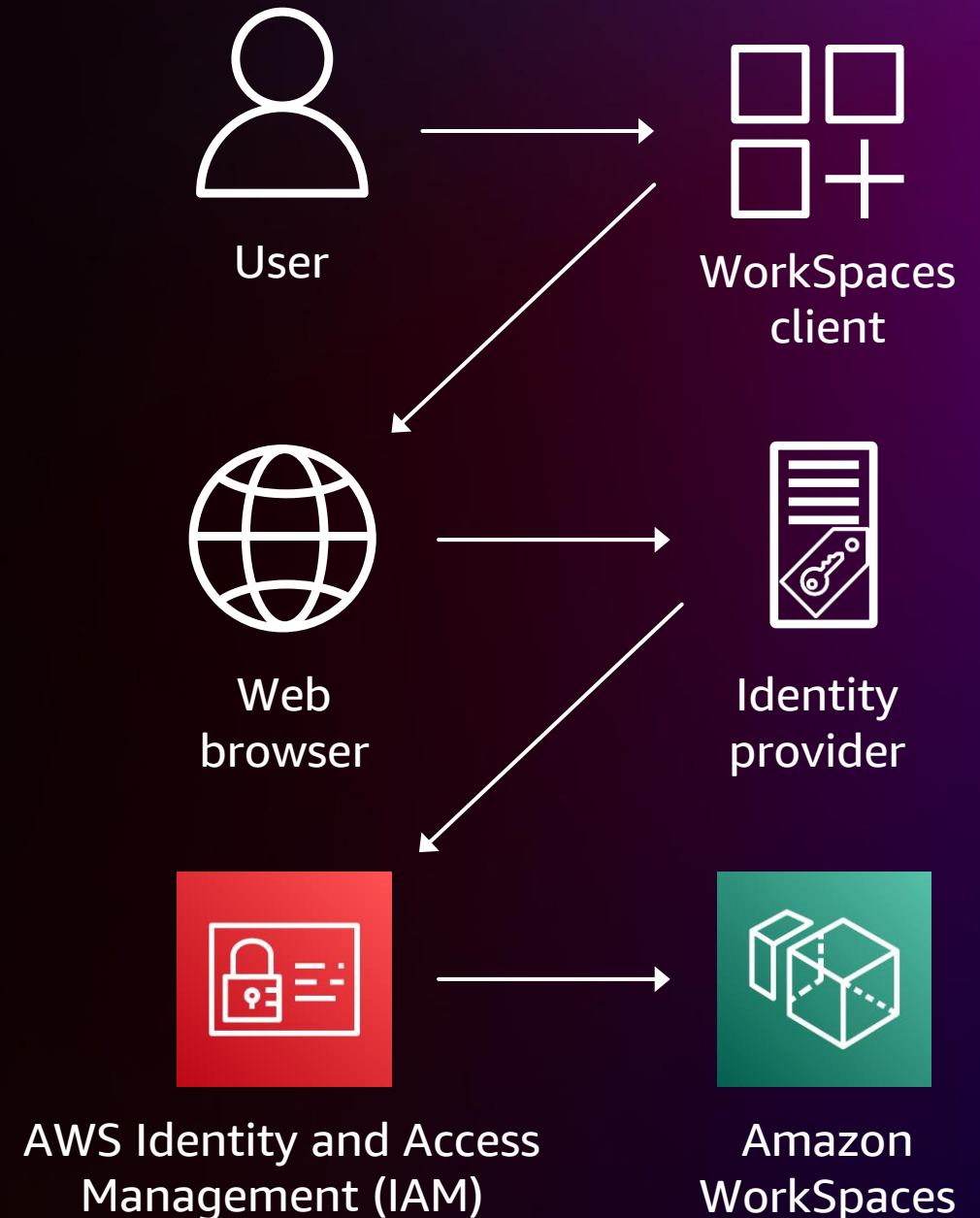


WSP

- Higher loss/latency tolerance
- Smart card and webcam support
- Web access and Ubuntu support

SAML 2.0 authentication

- Integration with many SAML 2.0 IdPs like Okta, Azure AD, Ping, and more
- Protect the login experience using features from SAML 2.0 IdP
- No longer manage RADIUS for 2FA



Back to the workshop



Wrap-up



End user computing: other track sessions

Type	Level	Title	Speakers	Code
Breakouts	200	Creating the workplace of the future with AWS end user computing	Muneer Mirza	EUC 201
	200	What's new with Amazon WorkSpaces, Amazon AppStream 2.0 & WorkSpaces Web	Hassan Ta, Rey Wang, Wylie N. Hartwell	EUC 202
	200	Creating flexibility and choice for VDI management with Amazon WorkSpaces	Kevin Goodman, Andrew Kloman	EUC 203
	200	Creating remote work environments that optimize security and productivity	Melissa Stein, Joshua Hartwig, Stephen Stetler	EUC 204
	300	Accelerating SaaS conversion of applications	Gurinder Raju	EUC 307
Chalk talks	200	Managing application deployment in an Amazon WorkSpaces environment	Sam Goad	EUC 205
	300	Securely stream AWS workloads to your remote workers	Andrew Morgan, Ariel Fu	EUC 301
	300	No refactoring required: Turning legacy applications into SaaS	Dave Jaskie, Stephen Stetler	EUC 302
	300	Best practices for migrating on-premises VDI workloads to the cloud	Phil Persson	EUC 308
	300	Choosing an Amazon AppStream 2.0 fleet to reduce costs & optimize experience	Manav Verma	EUC 309
	300	Streamlining log-on experience for Amazon WorkSpaces and AppStream 2.0	Asriel Agronin	EUC 310
	300	Securing end user computing workloads on AWS end user computing services	Michael Mattes	EUC 312

End user computing: other track sessions

Type	Level	Title	Speakers	Code
Workshops	300	Getting started with Amazon AppStream 2.0	Dylan Barlett	EUC 303
	300	Enable secure access to private resources with Amazon WorkSpaces Web	Spencer DeBrosse, Grant Joslyn	EUC 304
	300	Create an online software trial with Amazon AppStream 2.0	Jeremy Schiefer	EUC 305
	300	Getting started with Amazon WorkSpaces	Justin Grego	EUC 306
Builders	300	Building a secure end user computing environment for power users	Dan Garibay, Dave Jaskie, Roy Tokeshi, Aisha Bello, Robert Fountain	EUC 311
	300	Building streaming applications using Amazon AppStream 2.0 Elastic fleets	Dan Garibay, Dave Jaskie, Roy Tokeshi, Aisha Bello, Don Scott	EUC 313
Theater	NA	Maximize employee experience with Amazon WorkSpaces & AppStream 2.0	Stephan Stetler	EUC 001
	NA	Modernize your virtual desktop infrastructure with Amazon WorkSpaces	Andrew Kloman	EUC 002

Thank you!

Justin Grego

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