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SAS403-R

SaaS microservices deep dive: Multi-tenancy meets microservices

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Workshop goals

- Learn how software as a service (SaaS) influences the inner working of microservices and apply solutions to multi-tenant microservice challenges
- Pass tenant context securely throughout the execution flow of microservices
- Isolate tenant data access outside the application code
- Deal with routing challenges without adding complexity to the application
- Instrument microservices to seamlessly produce tenant-aware metrics

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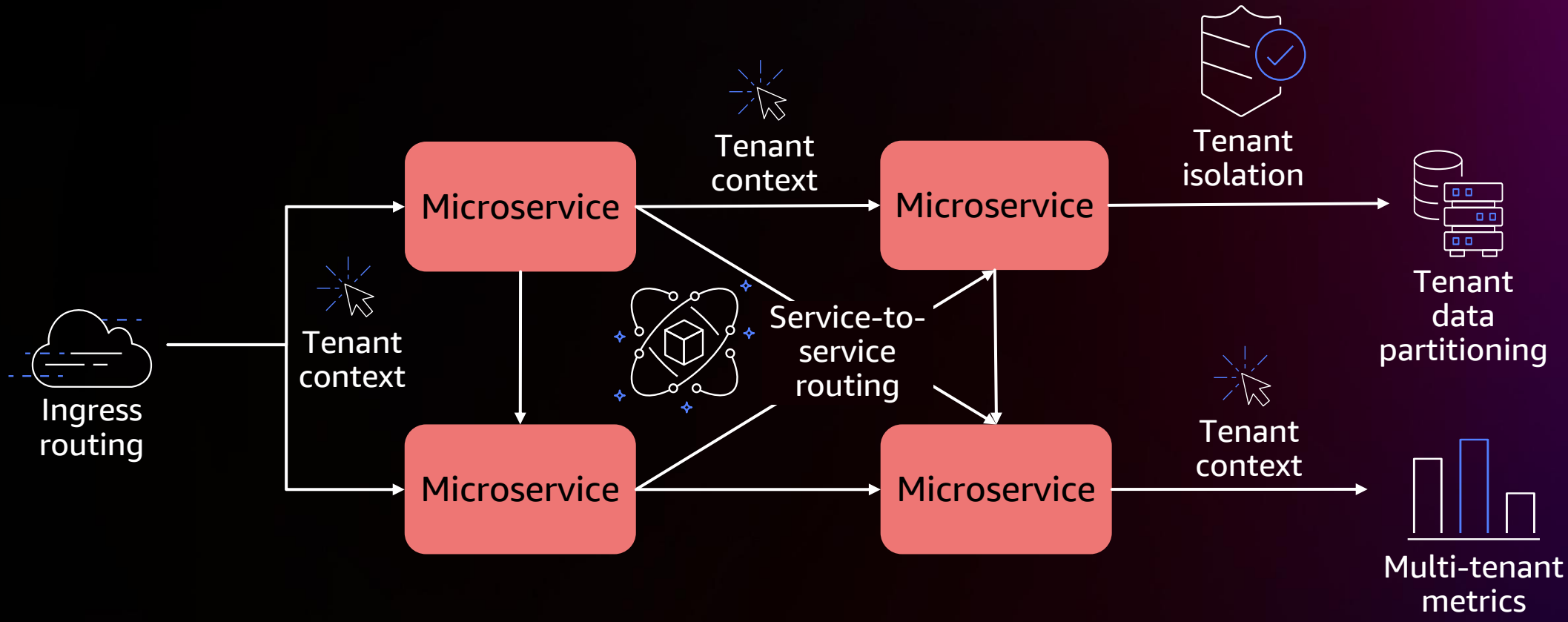
Multi-tenancy meets microservices



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Introduction

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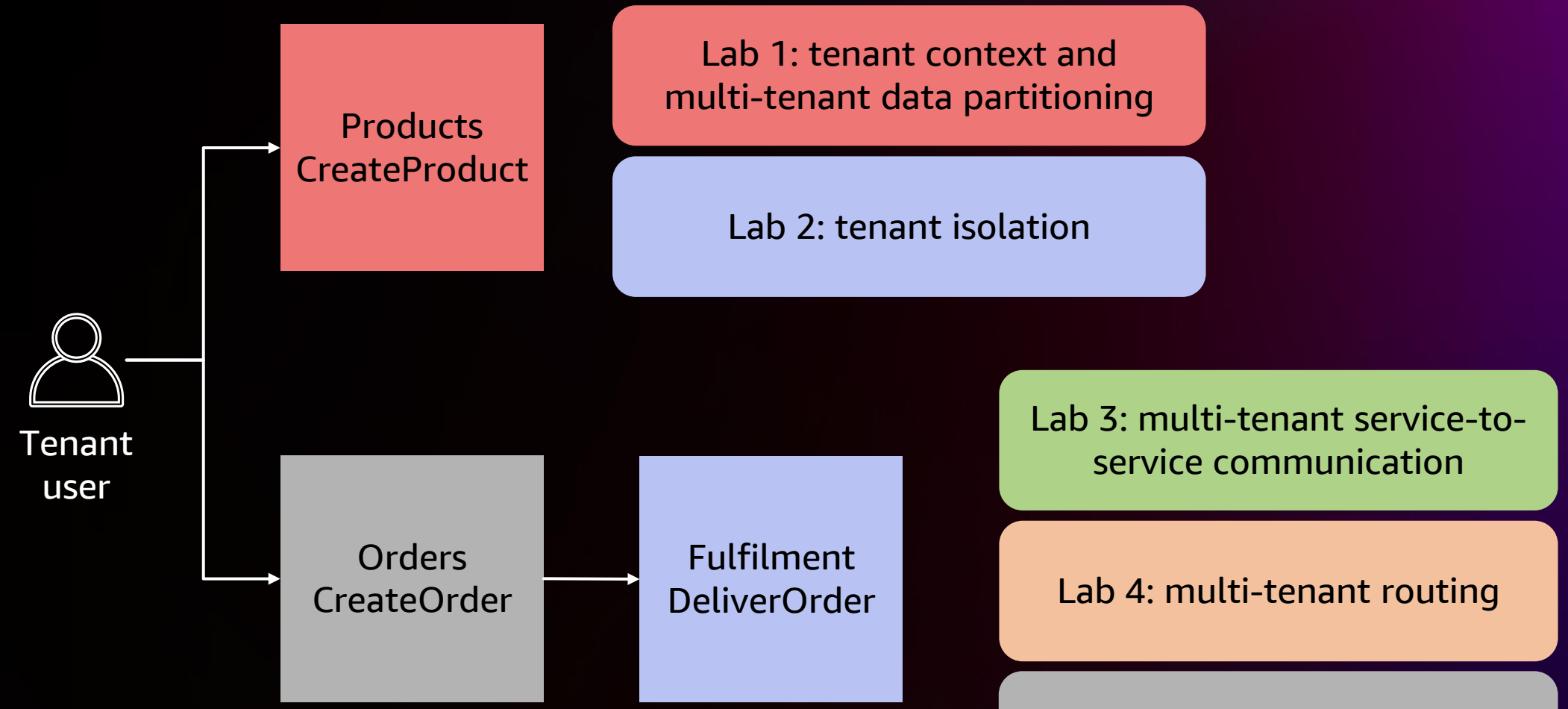
Introduction: Application conceptual view



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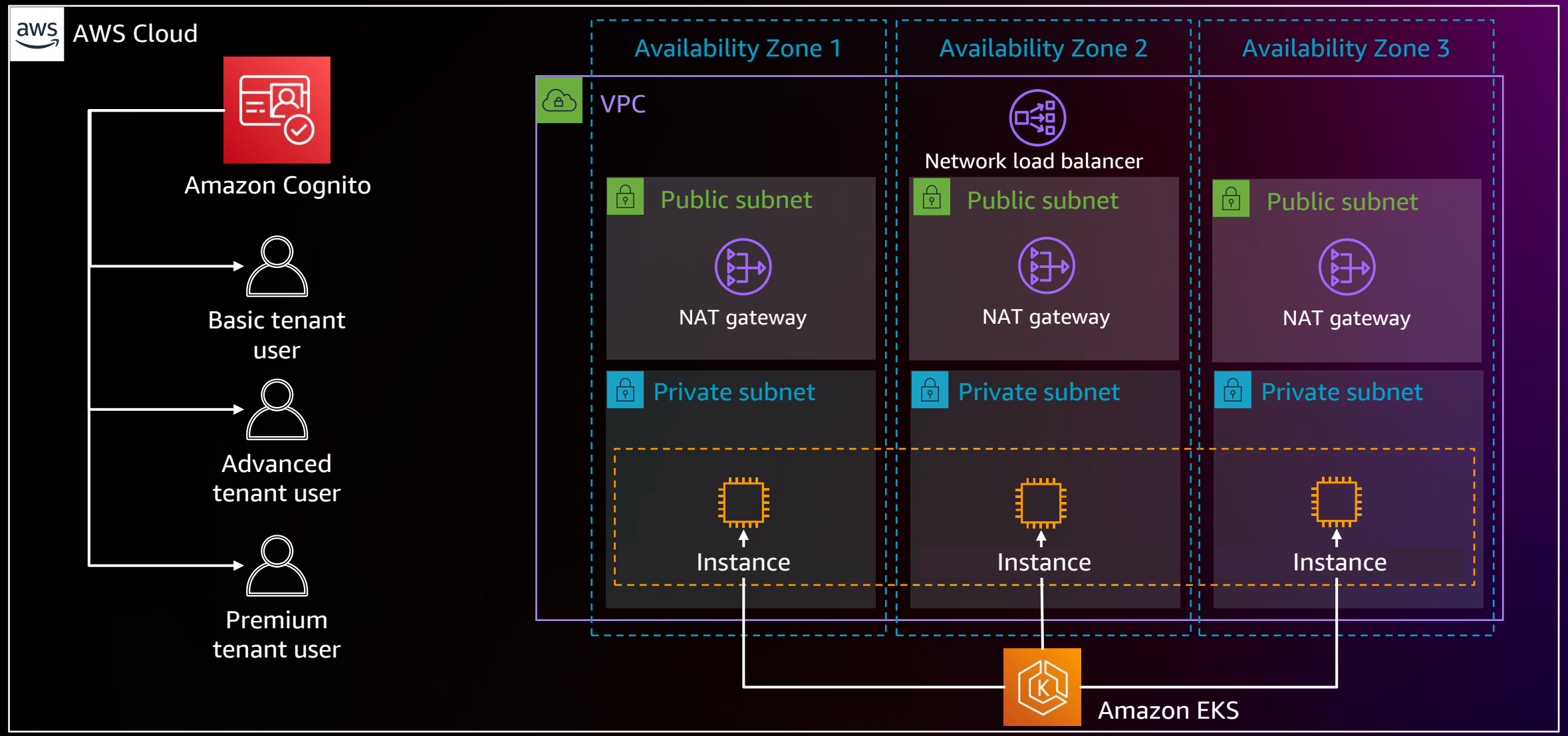
Introduction: Infrastructure starting point



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Lab 1: Tenant context and multi-tenant data partitioning

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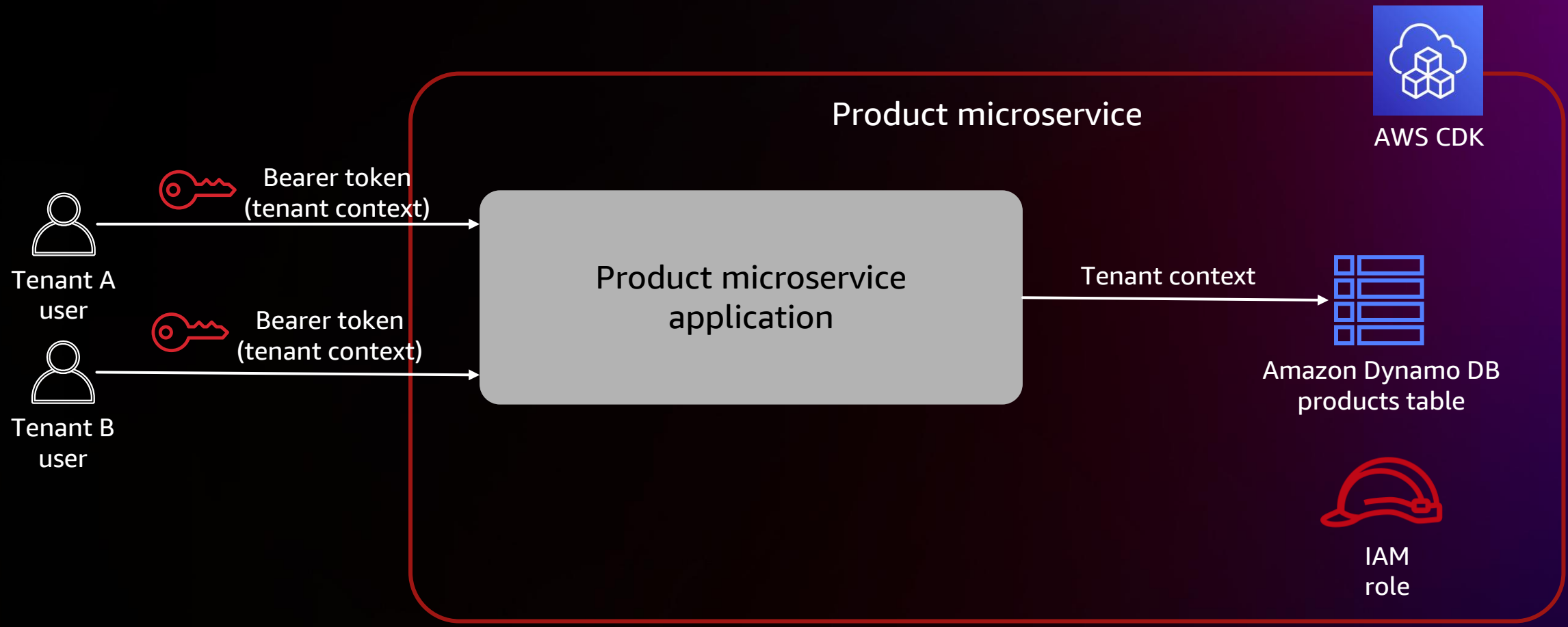
Lab 1: Acquiring tenant context



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Lab 2: Tenant isolation

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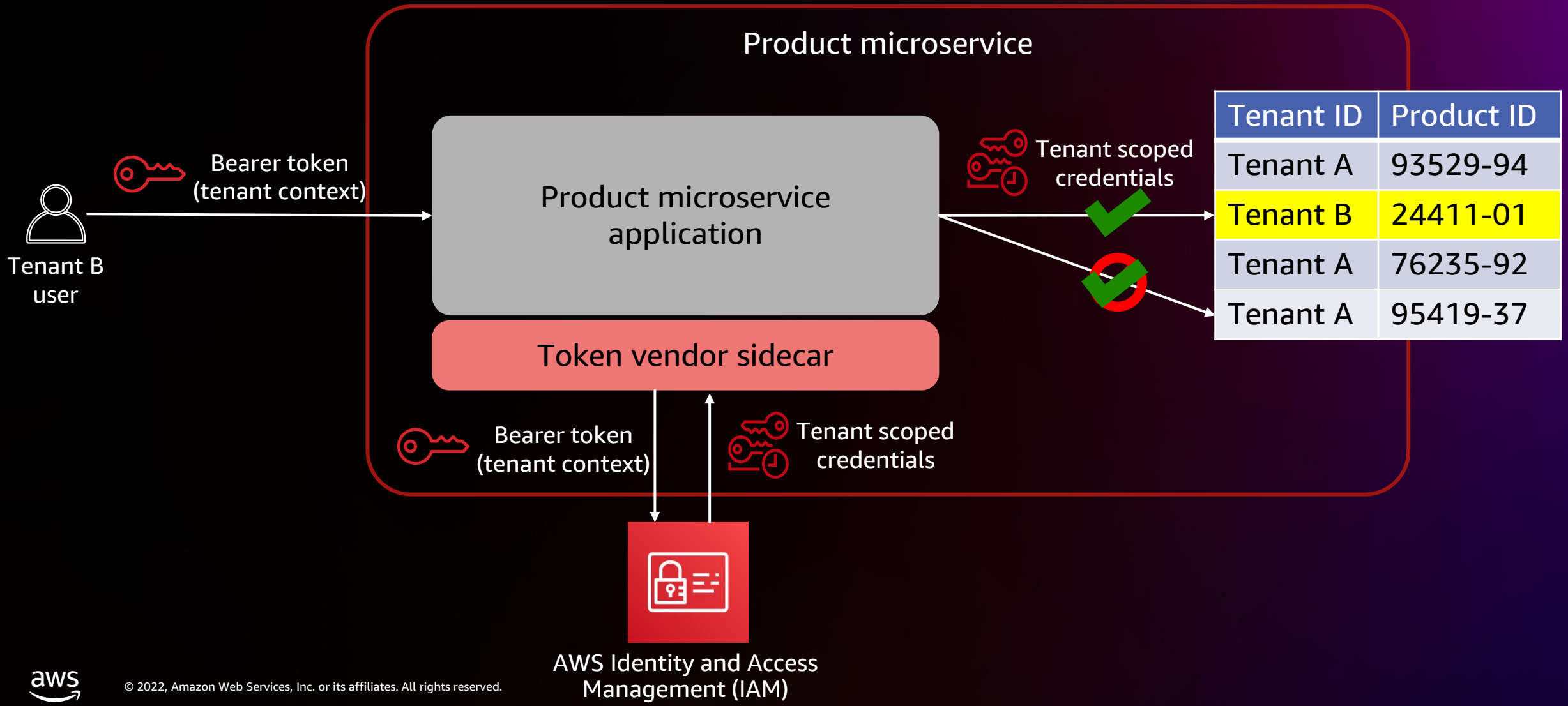
Lab 2: Hardening tenant isolation



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Lab 3: Multi-tenant service-to-service communication

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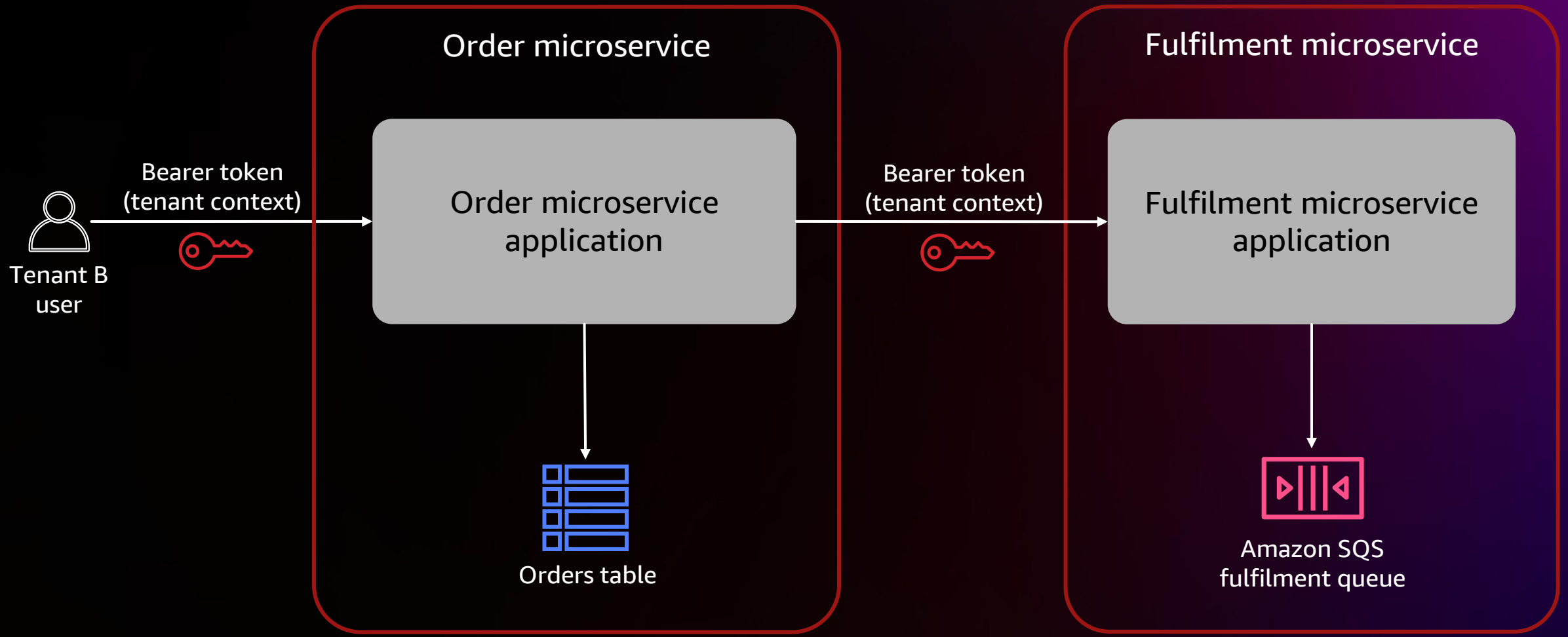
Lab 3: Flowing tenant context through services



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Lab 4: Multi-tenant routing challenges

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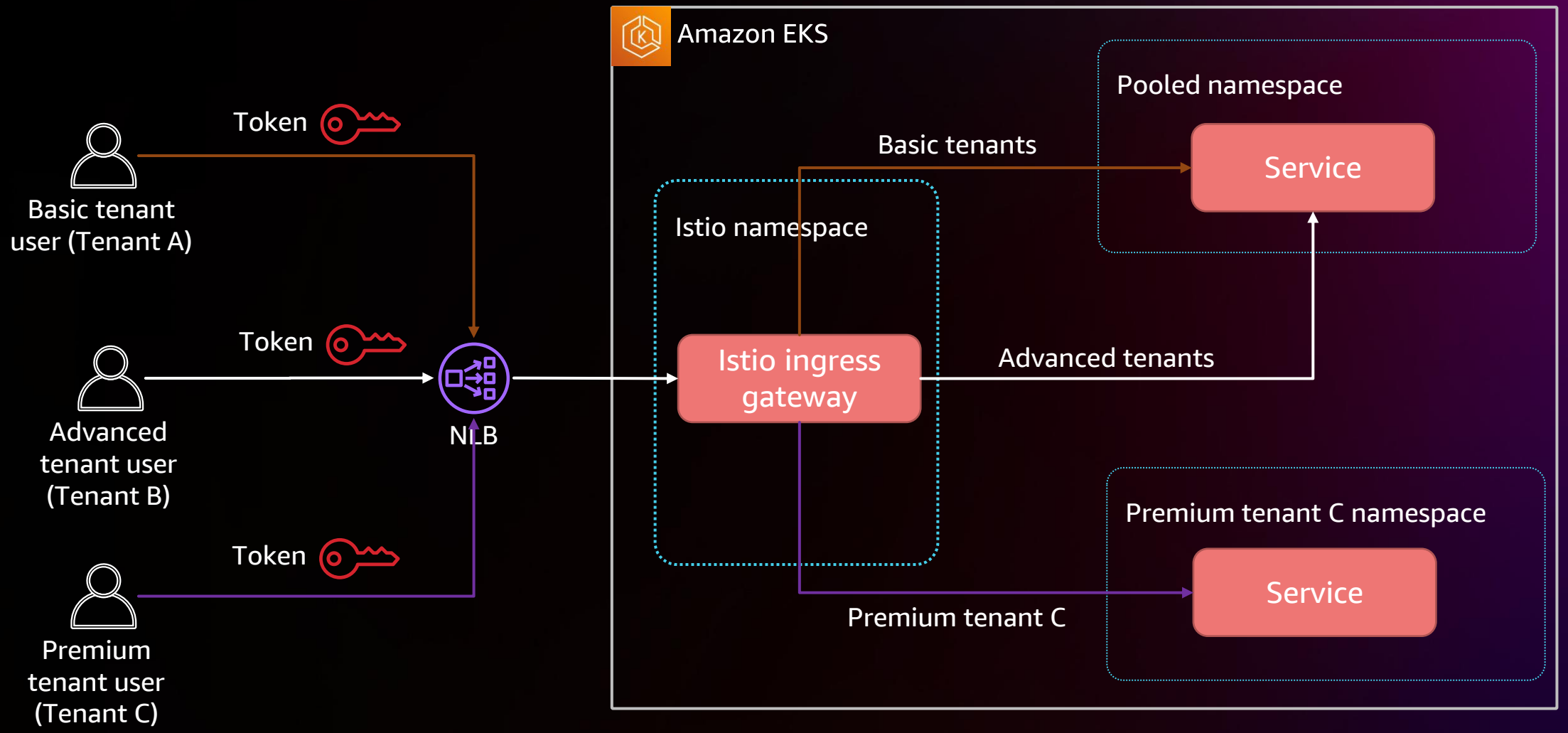
Lab 4: Tenant context ingress routing



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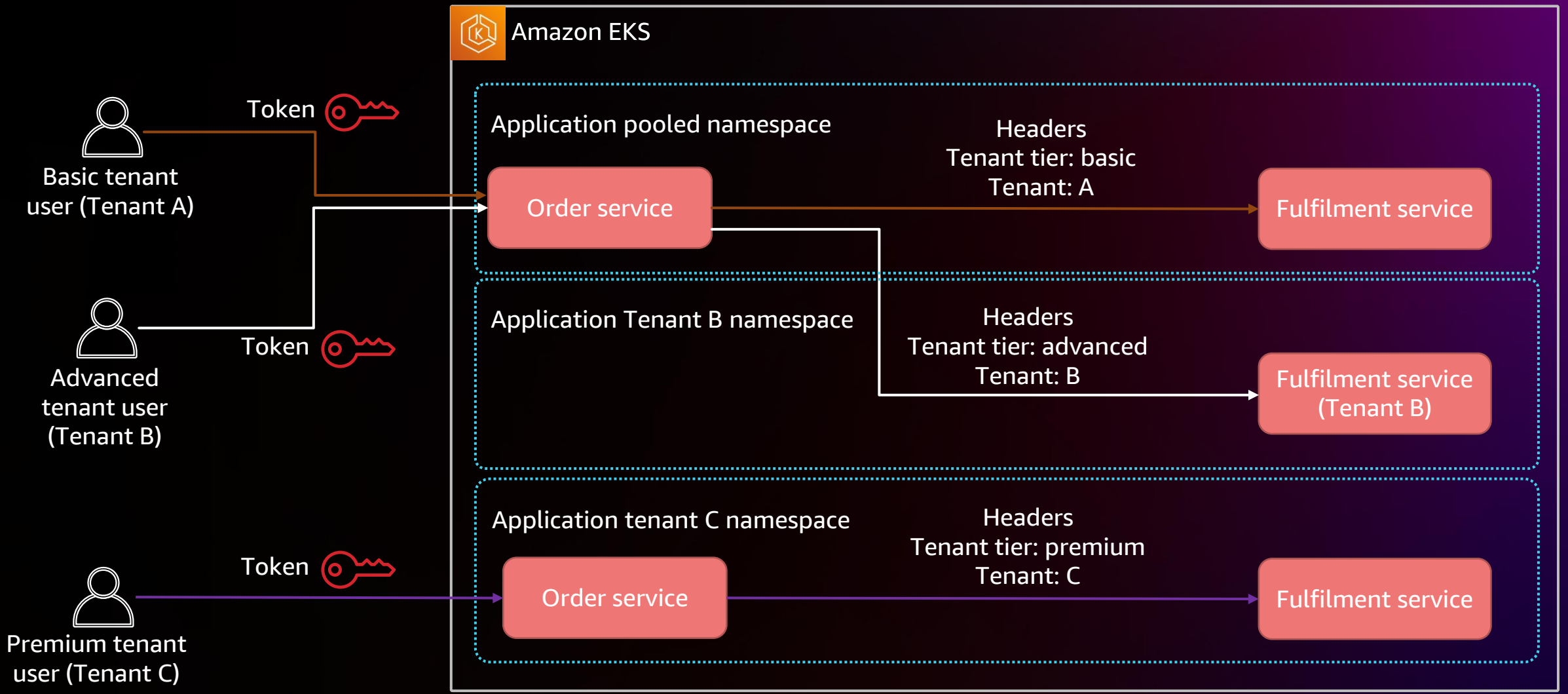
Lab 4: Tenant context service-to-service routing



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Lab 5: Multi-tenant metrics

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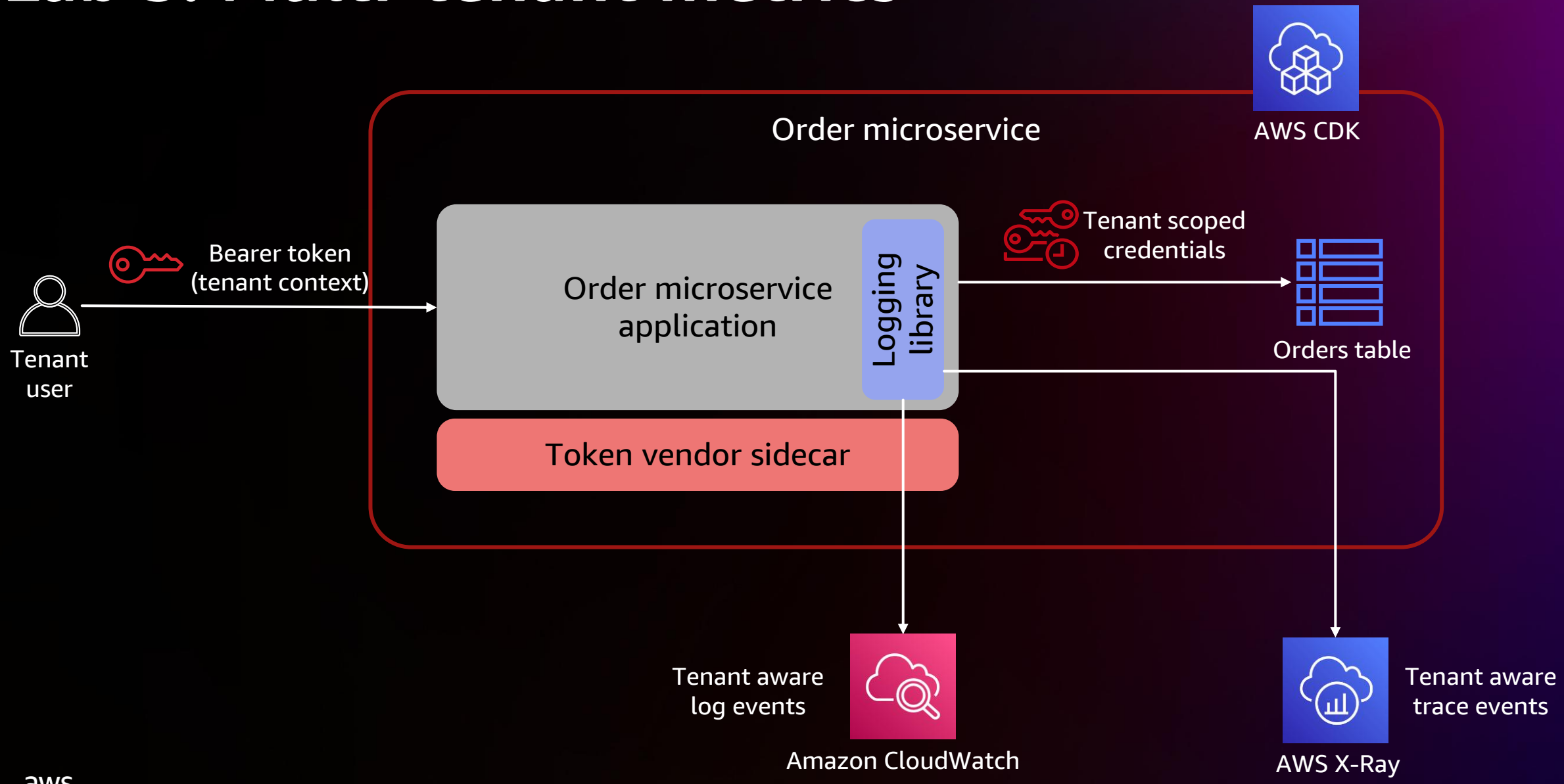
Lab 5: Multi-tenant metrics



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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 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

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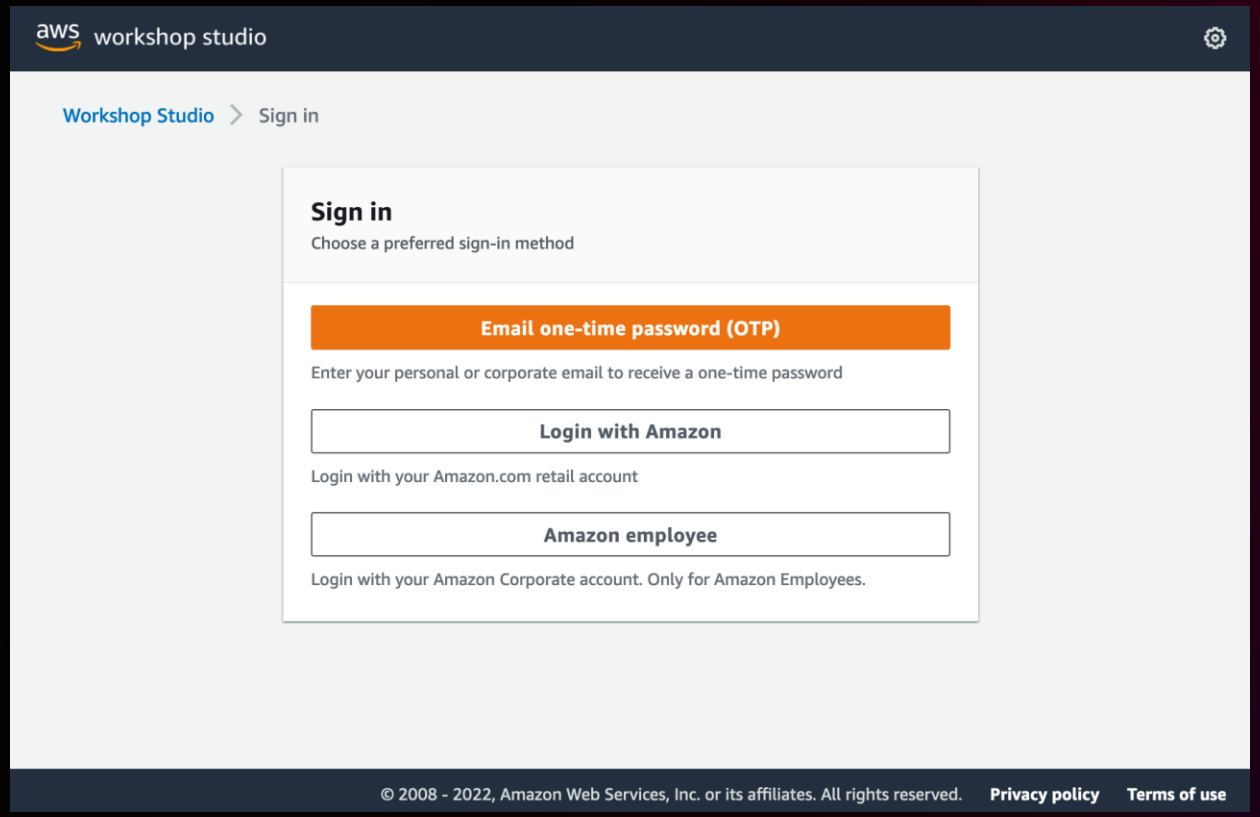
Step 1: Sign-in via your preferred method

https://s12d.com/SAS403



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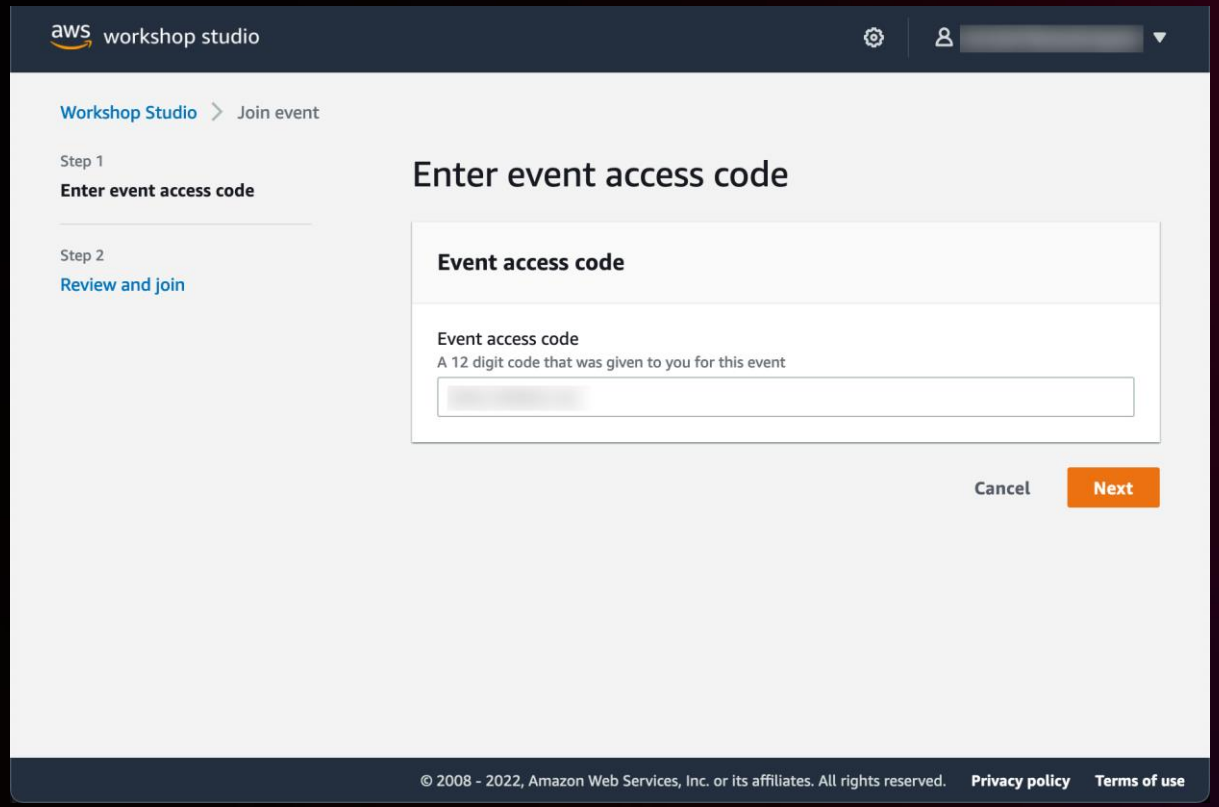
Step 2: Enter event access code

Enter 12-digit event access code; if you were given a one-click join link, you can skip this step



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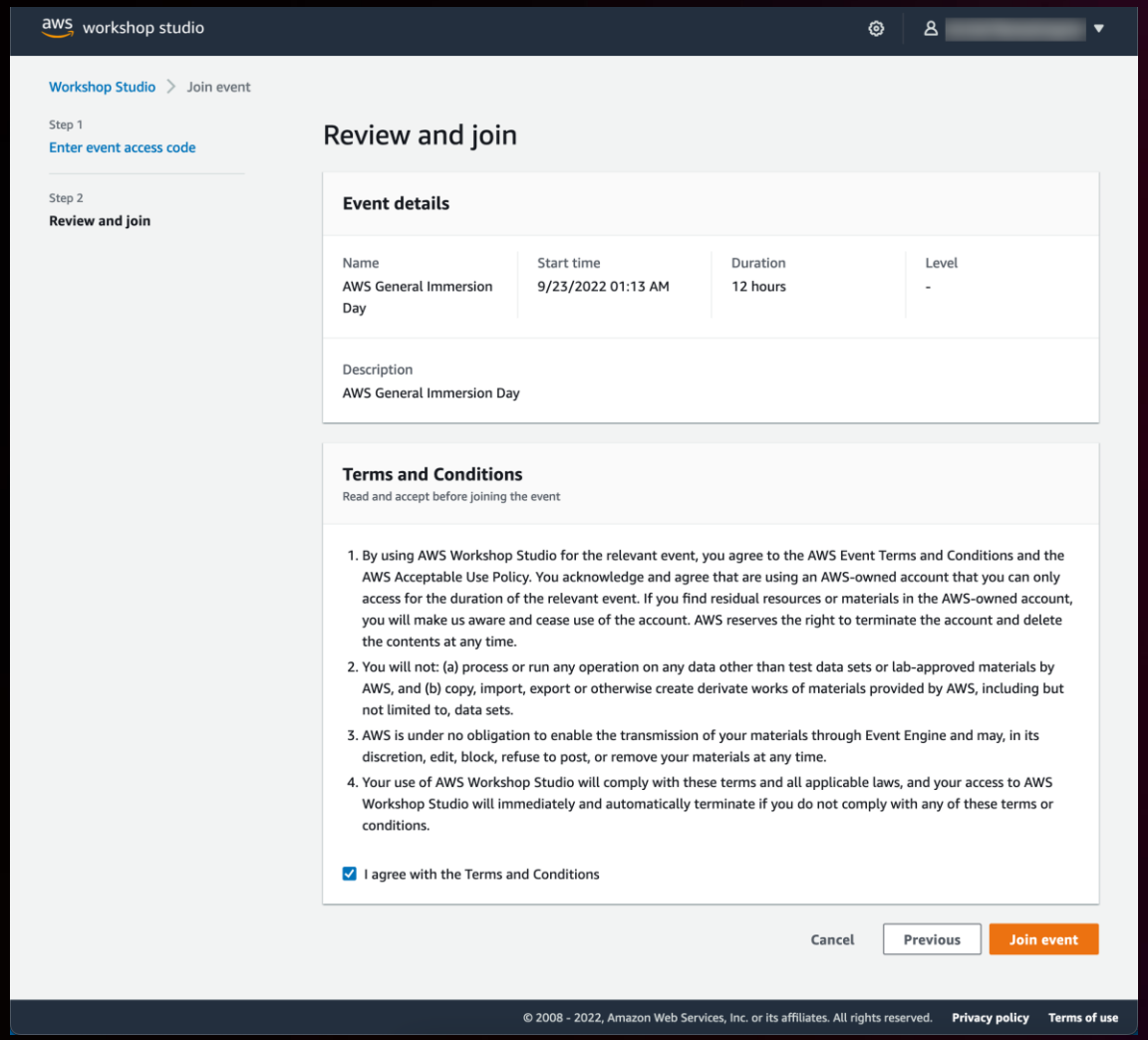
Step 3: Review terms and join event



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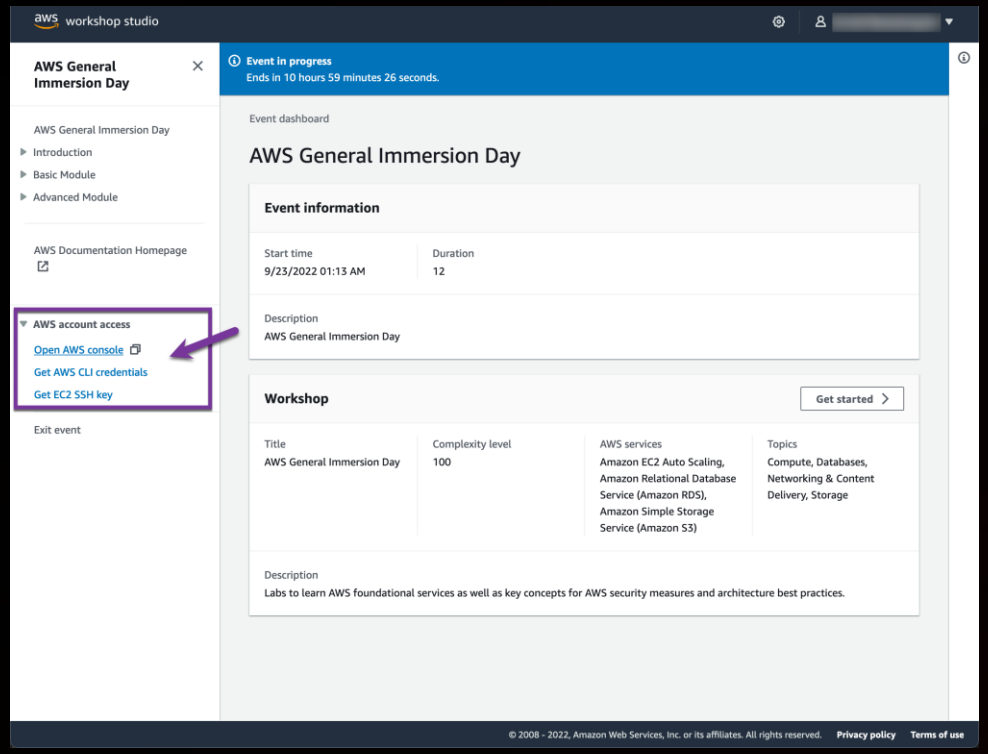
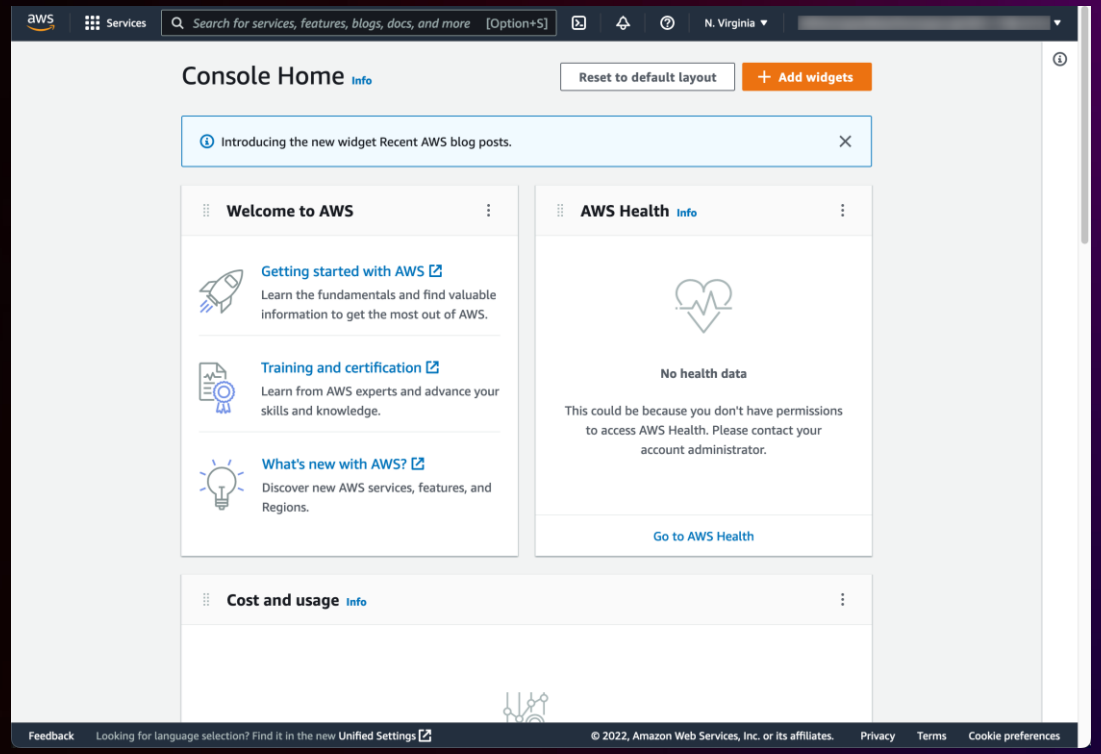
Step 4: Access AWS account

Access the AWS Console or generate AWS CLI credentials, as needed





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More SaaS sessions

Breakout sessions

- SAS305 – SaaS architecture patterns: From concept to implementation
- SAS405 – SaaS microservices deep dive: Simplifying multi-tenant development
- SAS306 – SaaS migration: Inside a real-world multi-tenant transformation
- SAS302 – Supporting extensibility in SaaS environments
- PEX310 – Optimizing your multi-tenant SaaS architecture

Workshops

- SAS403 - SaaS microservices deep dive: Multi-tenancy meets microservices
- SAS402 – Serverless meets SaaS: Inside a real-world serverless SaaS solution
- SAS401 – Amazon EKS SaaS: Building a working multi-tenant environment

Business session

- PEX209 – Building your SaaS journey on AWS

More SaaS sessions

Chalk talks

- SAS307 – DevOps and SaaS: Applying automation in multi-tenant environments
- SAS303 – SaaS anywhere: Building SaaS that runs in hybrid models
- SAS301 – Multi-tenant meets ML: Building ML-based SaaS environments
- SAS304 – Solving the SaaS compliance puzzle
- PEX313 – The SaaS control plane: The heart of SaaS growth
- ARC403 – EKS SaaS deep dive: Inside a multi-tenant EKS solution
- ARC323 – Designing a multi-tenant SaaS tiering and throttling strategy
- SVS315 - Building multi-tenant applications with AWS Lambda and AWS Fargate

Builder session

- ARC327 – How to optimize cost in your multi-tenant architecture

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Additional resources

1

Subscribe to AWS SaaS Insights

Get monthly emails with advice and the latest updates

2

Explore SaaS on AWS hub

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3

Discover resources for builders

Access our curated list of SaaS reference solutions, demos, tech events, and more

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Thank you!

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