

AWS re:Invent

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

Building a serverless Apache Kafka data pipeline

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Agenda

- Introductions
- Amazon MSK Serverless overview
- Architecture review
- Lab buildout

Apache Kafka

Open source event streaming platform

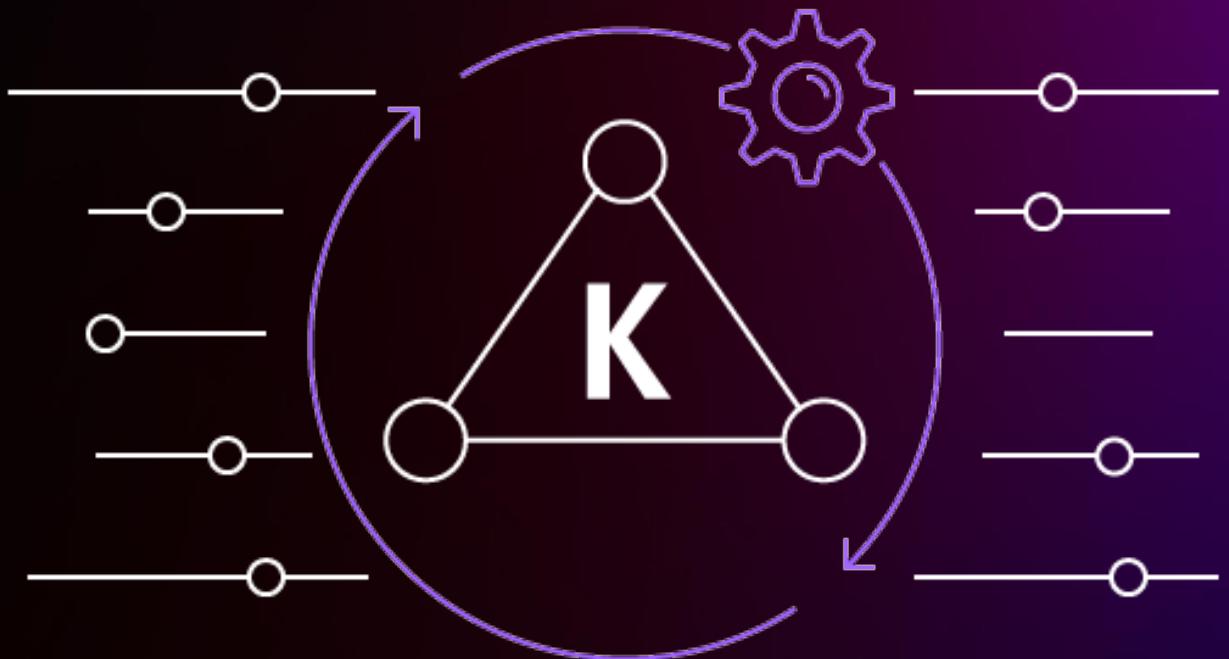
Low latency and high throughput

Fans out to any number of consumers

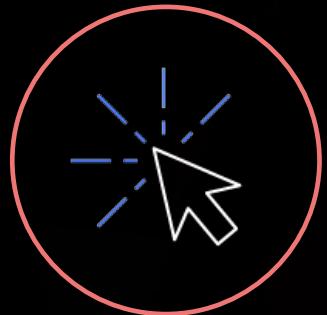
Enables use cases such as **messaging**,
event-stream processing, and more...



Amazon MSK Serverless



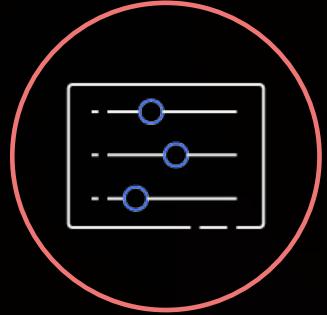
Key features



On-demand streaming capacity



Throughput-based pricing



Auto partition placement



Fully compatible

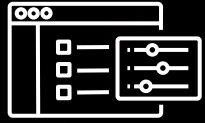


Same security as Amazon MSK



Same high availability

Key benefits



Simple to use

Get started with a few clicks and with existing applications



Lowers operational overhead

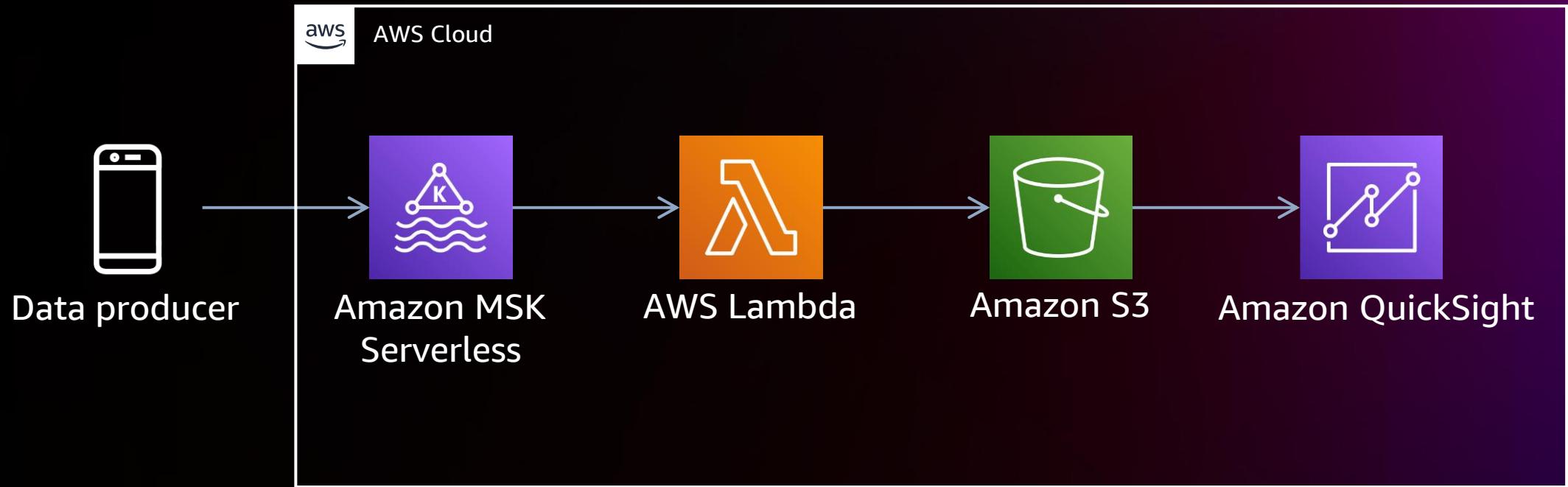
Use engineering hours to solve your customers' problems



Cost-effective

Especially for highly variable workloads

Architecture review – Typical scenario



Architecture review – Core workshop



- 1 AWS Fargate container produces clickstream data to Amazon MSK
- 2 AWS Lambda function consumes messages off the Kafka topic(s)
- 3 AWS Lambda function pushes processed messages to the bucket
- 4 Amazon QuickSight consumes processed data from the bucket

Architecture review – Optional module



- 1 AWS Fargate container produces clickstream data to Amazon MSK
- 2 Kinesis Data Analytics consumes messages from the Kafka topics in real time
- 3 Kinesis Data Analytics pushes transformed messages to Amazon OpenSearch Service

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.

Step 1: Sign in via your preferred method

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

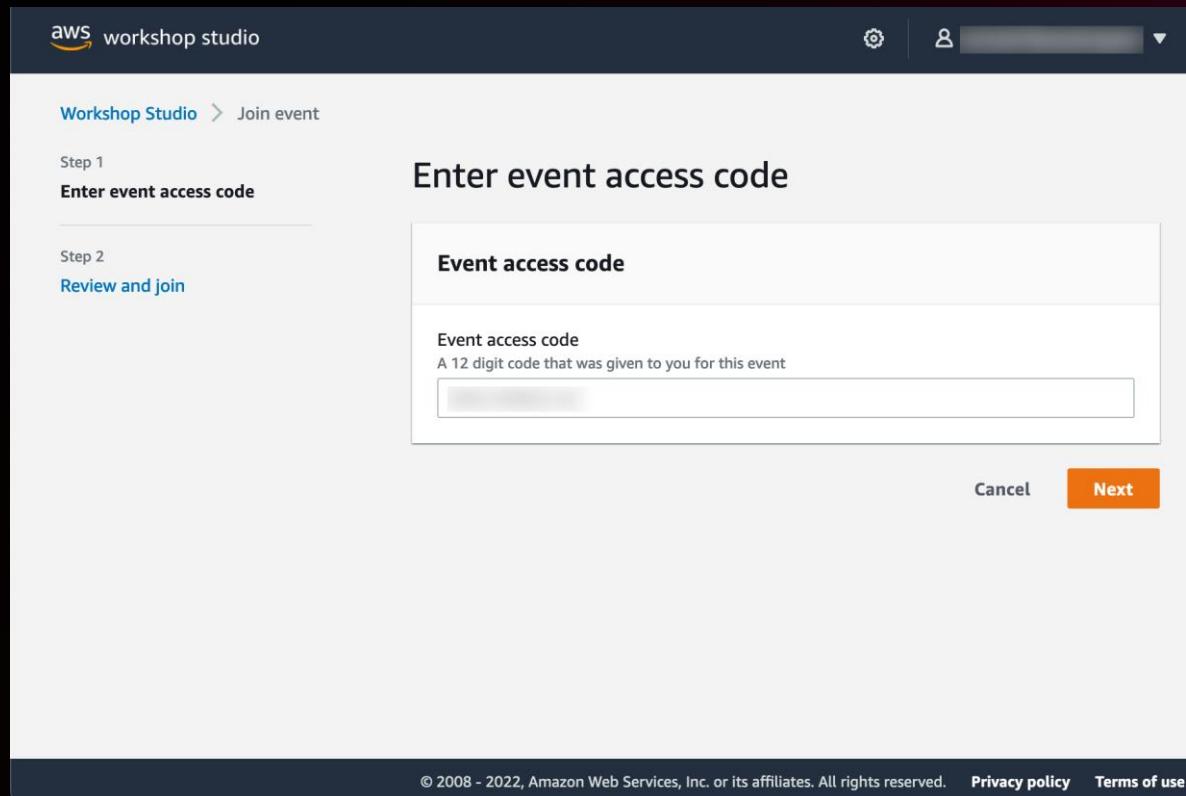


A screenshot of the AWS Workshop Studio sign-in interface. The top navigation bar includes the AWS logo and the text "workshop studio". Below the navigation, the text "Workshop Studio > Sign in" is displayed. A central box is titled "Sign in" with the sub-instruction "Choose a preferred sign-in method". Three options are listed: "Email one-time password (OTP)" (highlighted with an orange background), "Login with Amazon" (with a light gray background), and "Amazon employee" (with a light gray background). The bottom of the page features a dark footer bar with the text "© 2008 - 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved." and links for "Privacy policy" and "Terms of use".

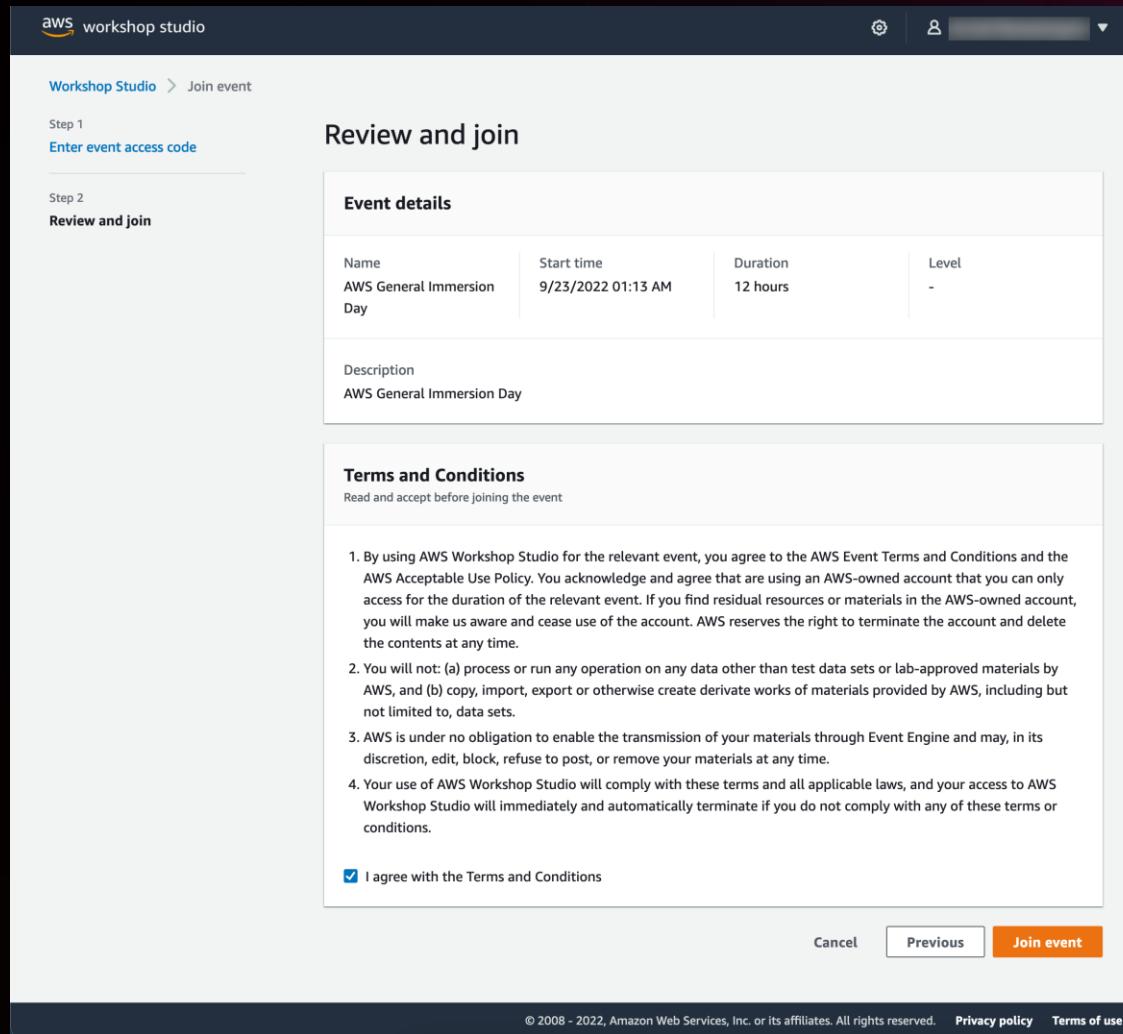
Step 2: Enter event access code

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

bc73-02fde1-cf



Step 3: Review terms and join event



The screenshot shows the 'Review and join' step of the AWS Workshop Studio 'Join event' process. The interface is divided into two main sections: 'Event details' and 'Terms and Conditions'.

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 derivative 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.

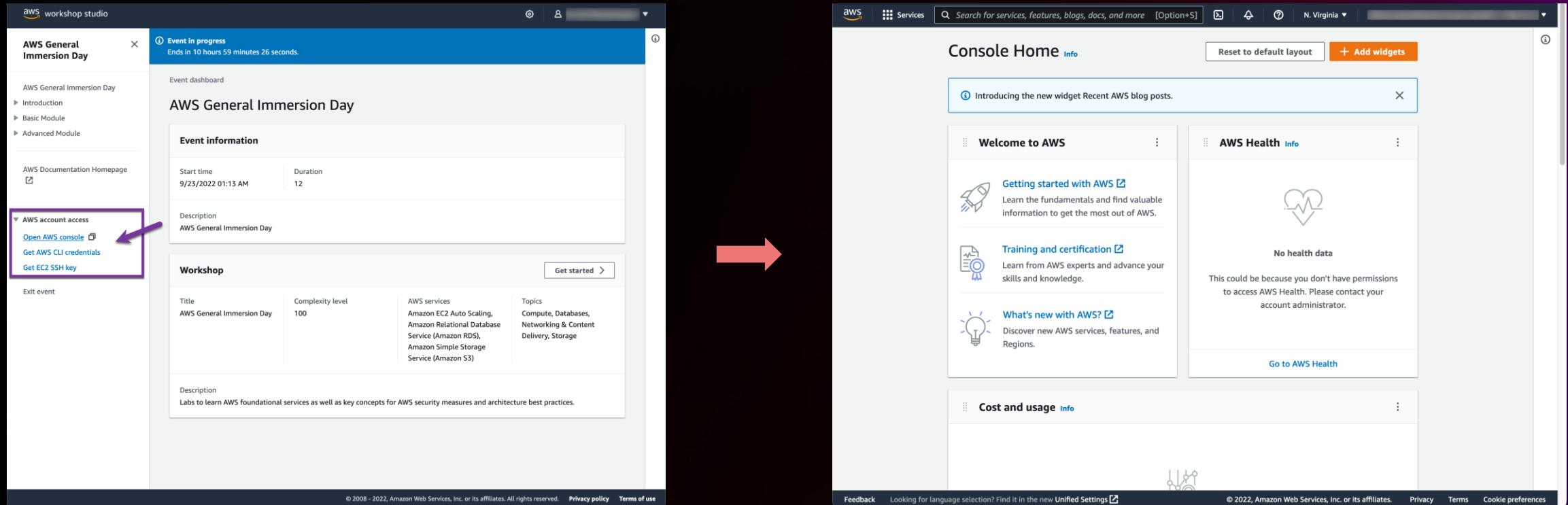
I agree with the Terms and Conditions

Cancel Previous **Join event**

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Step 4: Access AWS account

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



Step 5: Get started with the workshop

AWS workshop studio

AWS General Immersion Day

Event in progress
Ends in 10 hours 59 minutes 26 seconds.

Event dashboard

AWS General Immersion Day

Event information

| | |
|--------------------|----------|
| Start time | Duration |
| 9/23/2022 01:13 AM | 12 |

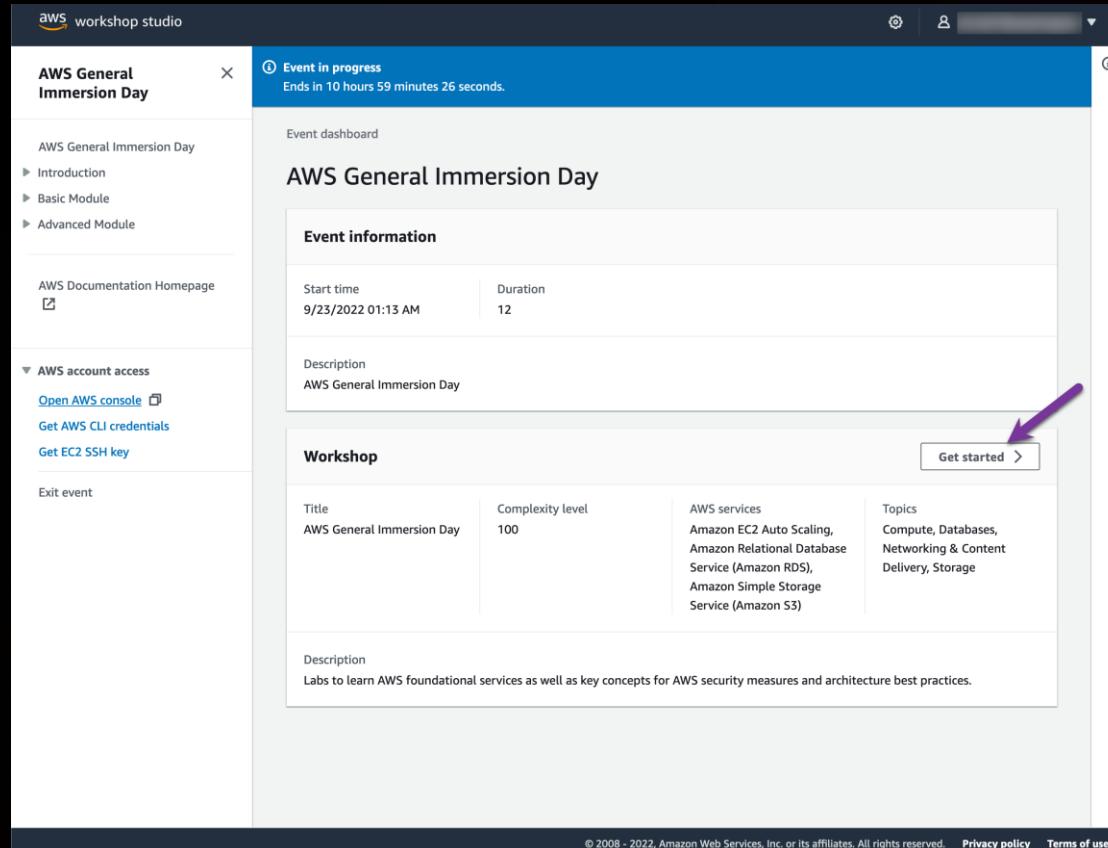
Description
AWS General Immersion Day

Workshop

| | | | |
|---------------------------|------------------|---|--|
| Title | Complexity level | AWS services | Topics |
| AWS General Immersion Day | 100 | Amazon EC2 Auto Scaling, Amazon Relational Database Service (Amazon RDS), Amazon Simple Storage Service (Amazon S3) | Compute, Databases, Networking & Content Delivery, Storage |

Description
Labs to learn AWS foundational services as well as key concepts for AWS security measures and architecture best practices.

Get started >



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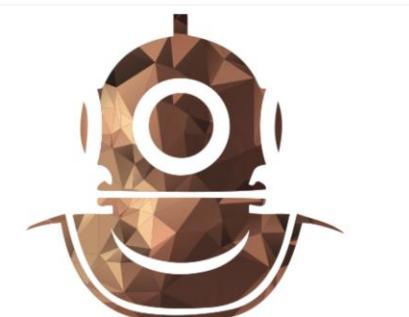
AWS workshop studio

AWS General Immersion Day

Event in progress
Ends in 10 hours 57 minutes 12 seconds.

Event dashboard > AWS General Immersion Day

AWS General Immersion Day



IMMERSION DAYS

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.

[Previous](#) [Next](#)

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Thank you!

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Please complete the session
survey in the **mobile app**



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