

# AWS re:Invent

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

CON203

# Explore the foundations of AWS container services

Re Alvarez Parmar (he/him)

Principal Containers Specialist Solutions Architect  
AWS



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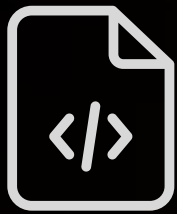
# Why use containers?



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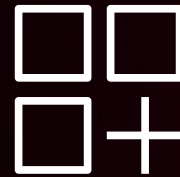
# Applications aren't just code, they have dependencies



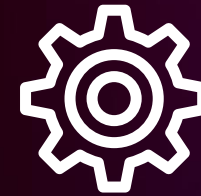
Code



Runtime

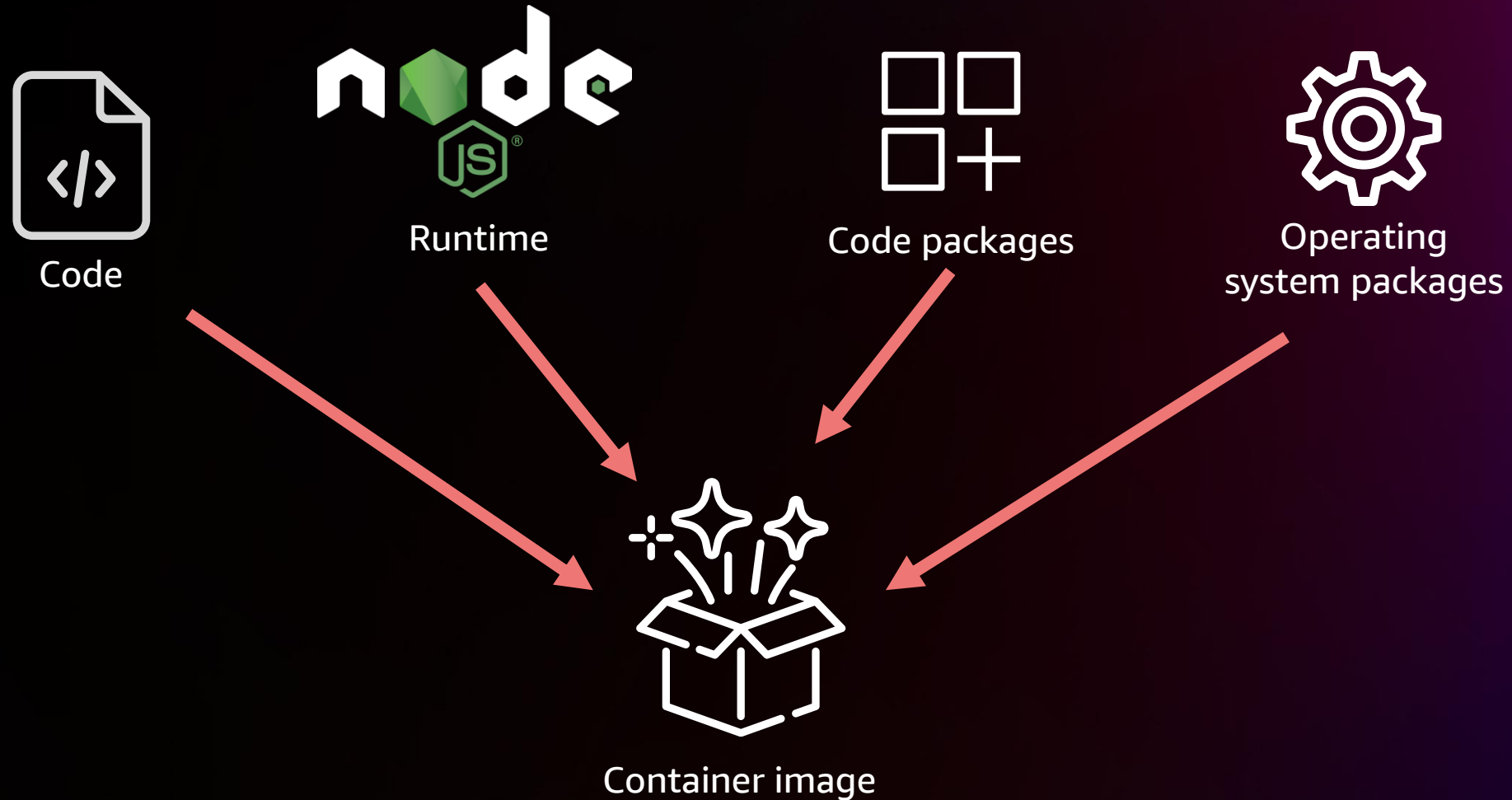


Code packages

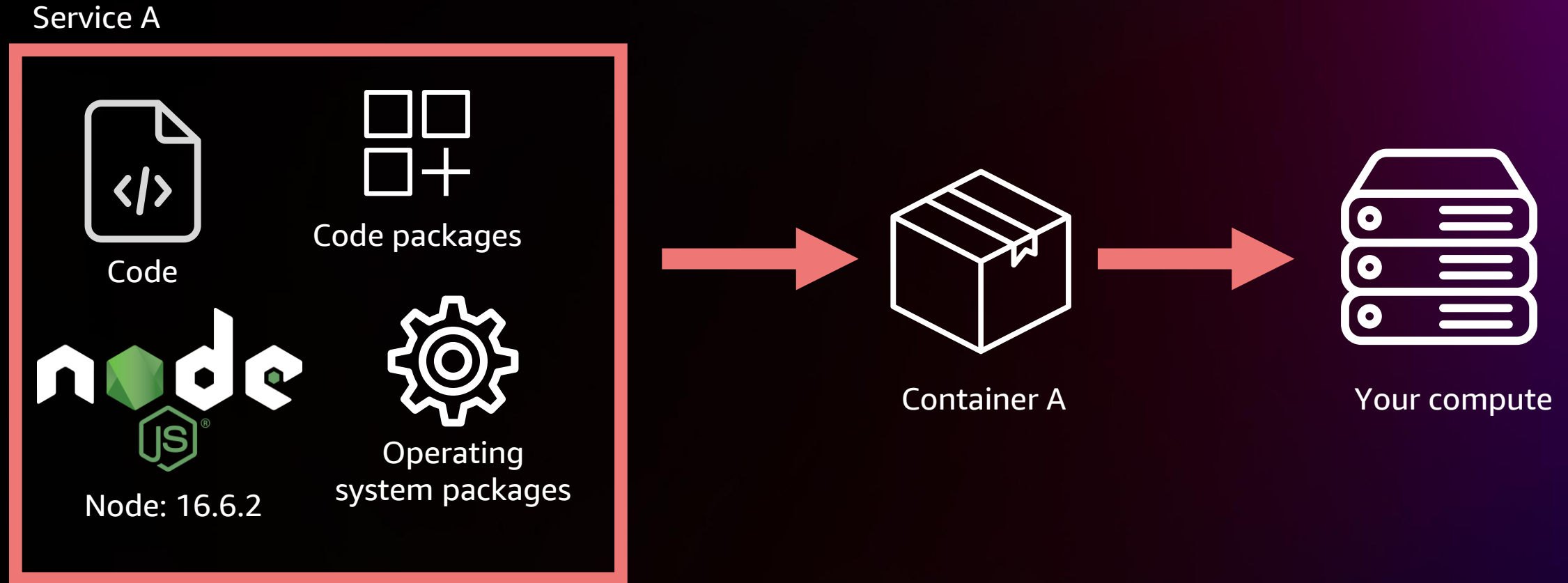


Operating  
system packages

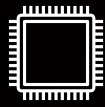
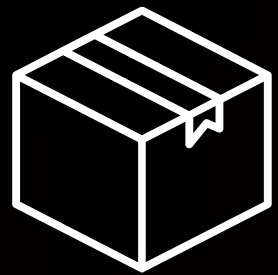
# Containers turn applications into one deployable artifact



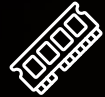
# Containers turn dependencies into one deployable artifact that works the same way anywhere



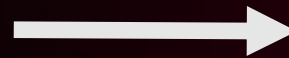
# From description to running application



1 x vCPU



2 GB memory

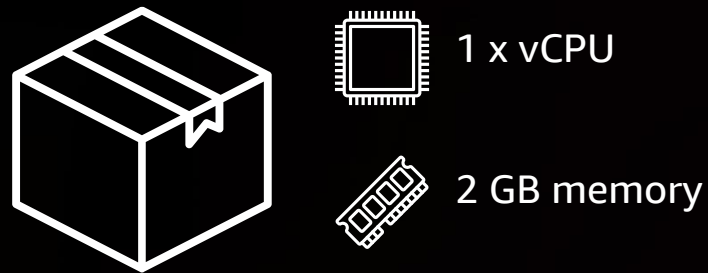


AWS native  
container  
services

Here is my container image. It needs 1 CPU and 2 GB of memory to run. I want to launch 4 copies of it as a service

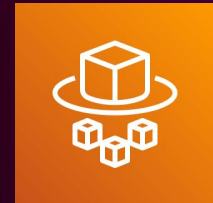
The container is your unit of deployment. The compute is flexible

# Amazon ECS is compatible with multiple types of compute

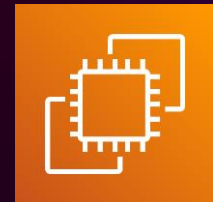


Amazon ECS

Here is my container image. It needs 1 CPU and 2 GB of memory to run. I want to launch 4 copies of it as a service



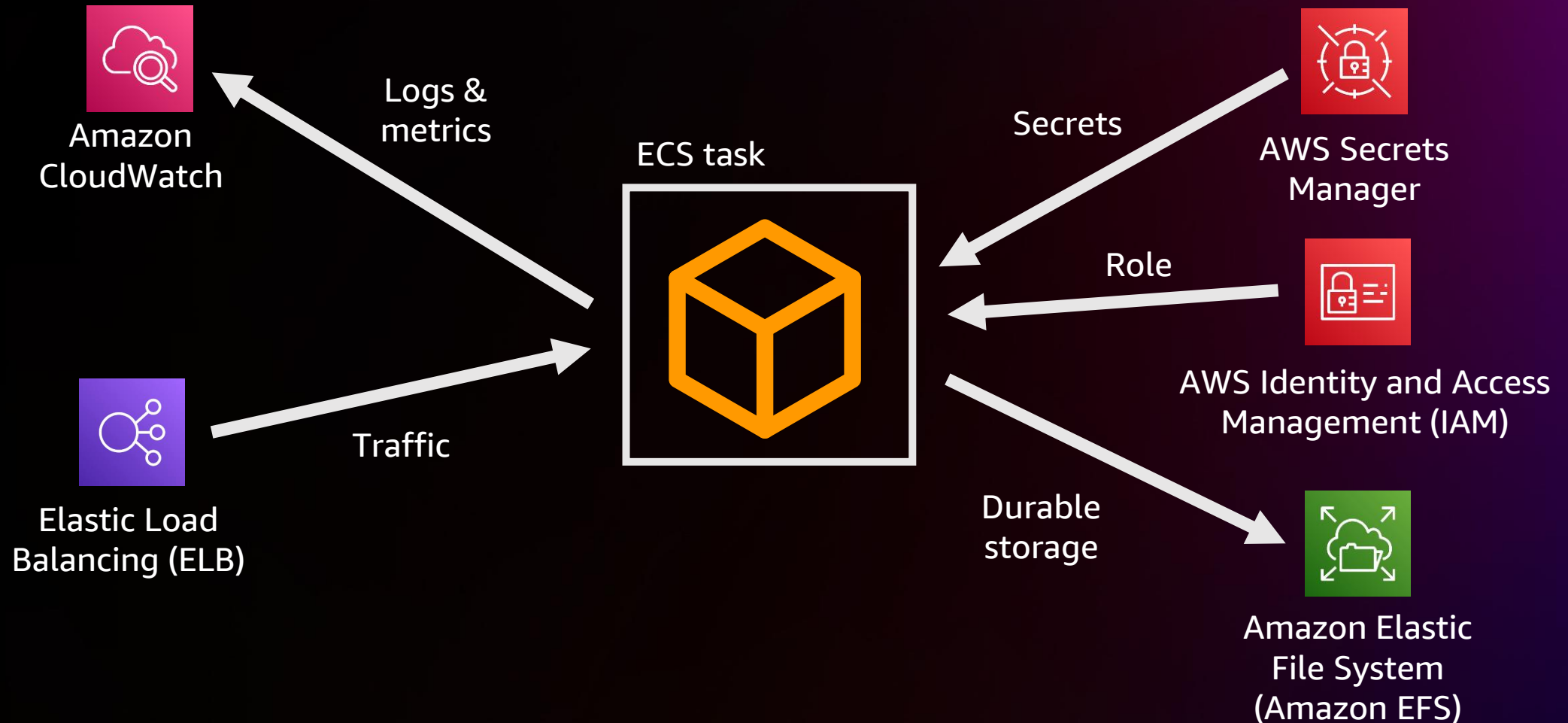
AWS Fargate



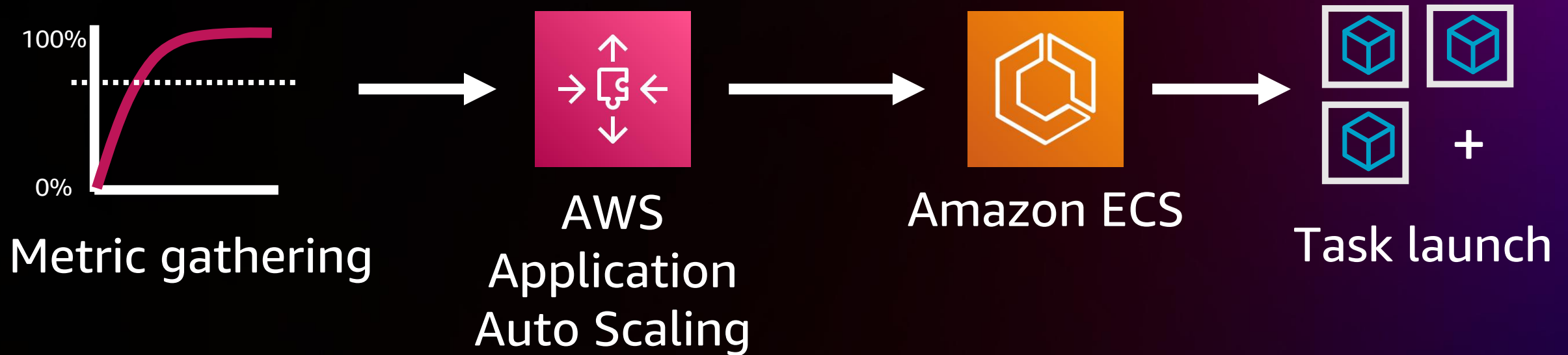
Amazon EC2



# Amazon ECS automates attachments to application containers



# Amazon ECS monitors the deployment to restart and scale it as needed



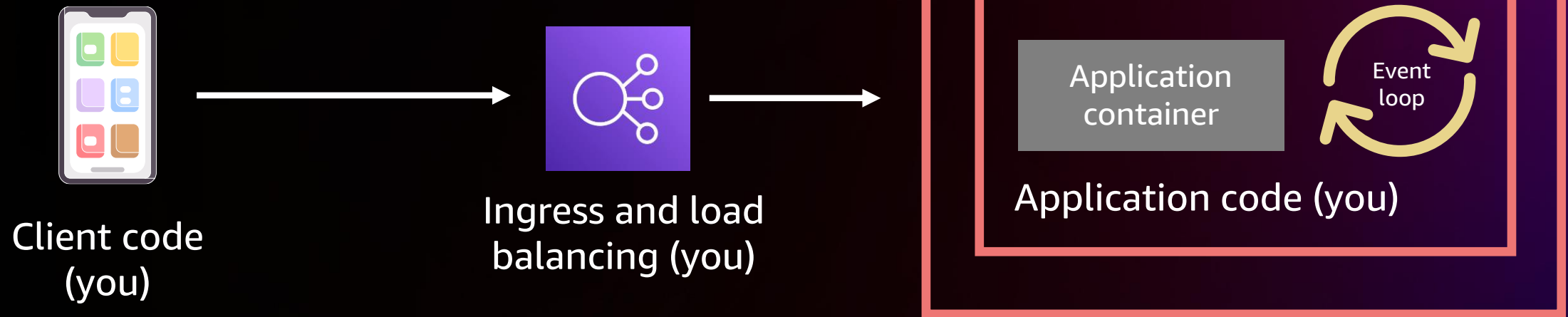


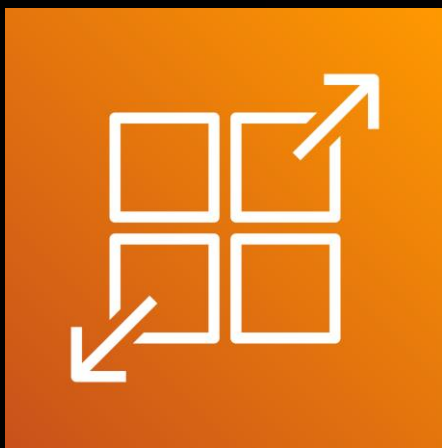
# AWS Fargate

Serverless containers, with more control over the details

# AWS Fargate provides microVMs for your containers

AWS = Fully managed by AWS  
You = Your responsibility to manage





# AWS App Runner

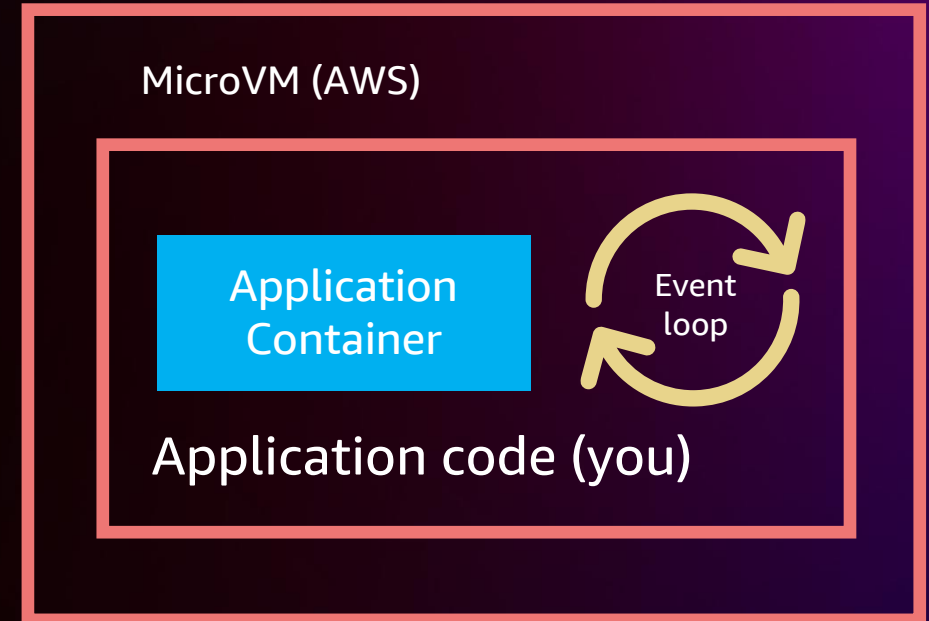
A serverless, autoscaling endpoint  
for your container image

# AWS App Runner manages most of the stack for you

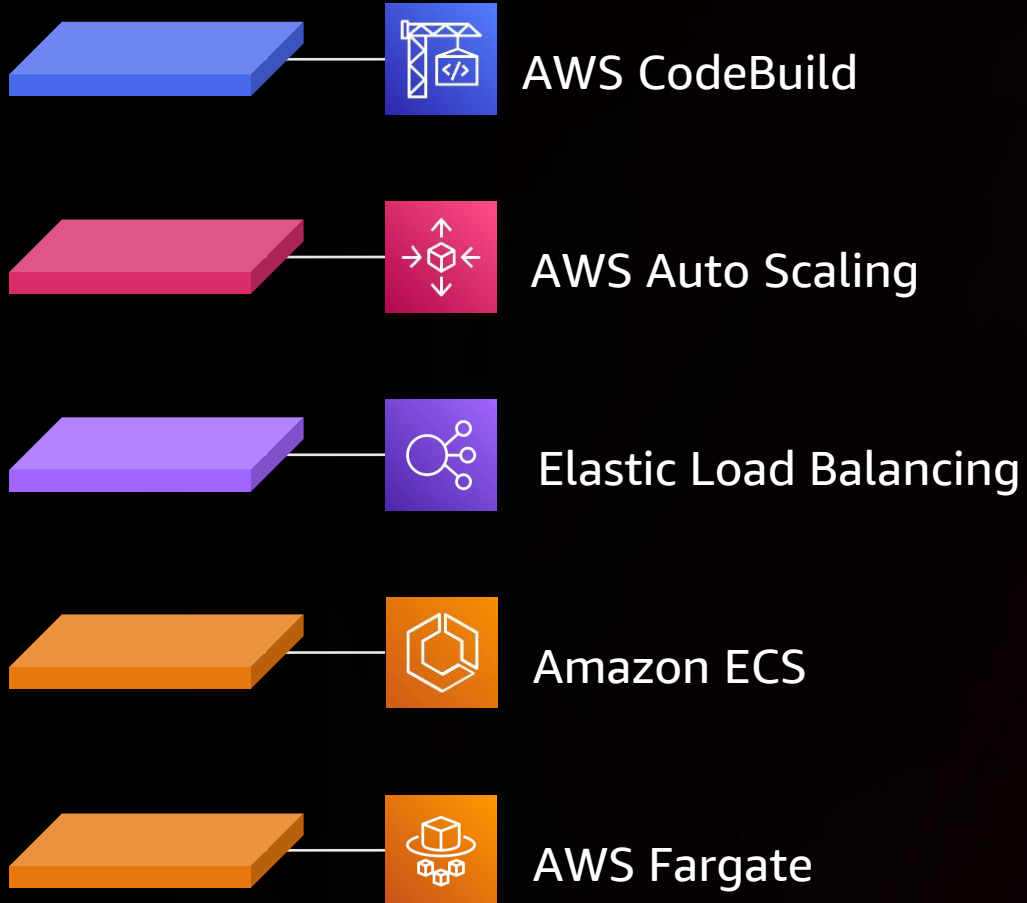
AWS = Fully managed by AWS  
You = Your responsibility to manage



Scaling (AWS)



# Cloud infrastructure is flexible

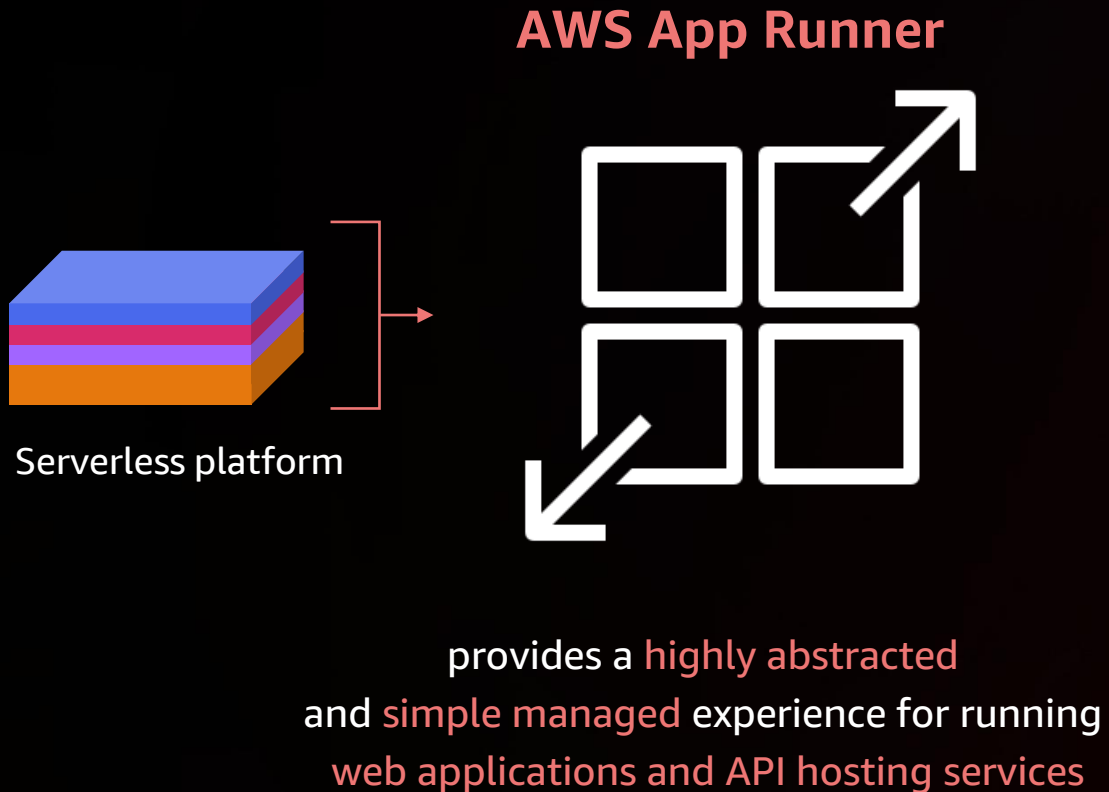


**Web application**



**Backend server**

# Fully managed service for web applications



**Web application**



**Backend server**



# Workshop time



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# Workshop Overview

1. Containerize a Node.js web application
2. Deploy the application in AWS Fargate
3. Load test the application
4. Deploy the application in AWS App Runner

# 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>

Access Code: 2ff0-0bacb6-65



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

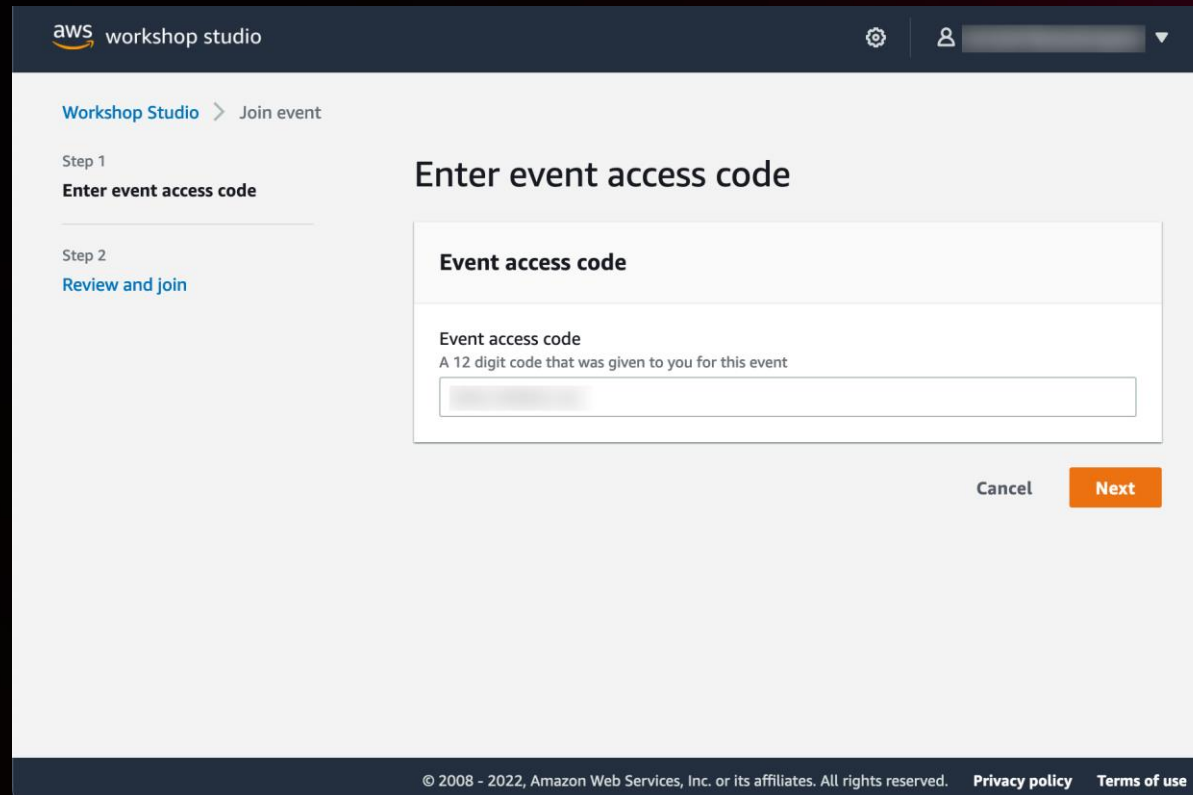
**Amazon employee**

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; if you were given a 1-click join link, you can skip this step



The screenshot shows the AWS Workshop Studio interface for joining an event. The top navigation bar includes the AWS logo, 'workshop studio', a settings gear icon, and a user profile icon. The breadcrumb trail is 'Workshop Studio > Join event'. On the left, a progress indicator shows 'Step 1 Enter event access code' as the current step and 'Step 2 Review and join' as the next step. The main heading is 'Enter event access code'. Below this, a box titled 'Event access code' contains the instruction 'Event access code' and 'A 12 digit code that was given to you for this event', followed by a text input field. At the bottom right of the form area are 'Cancel' and 'Next' buttons. The footer contains copyright information 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

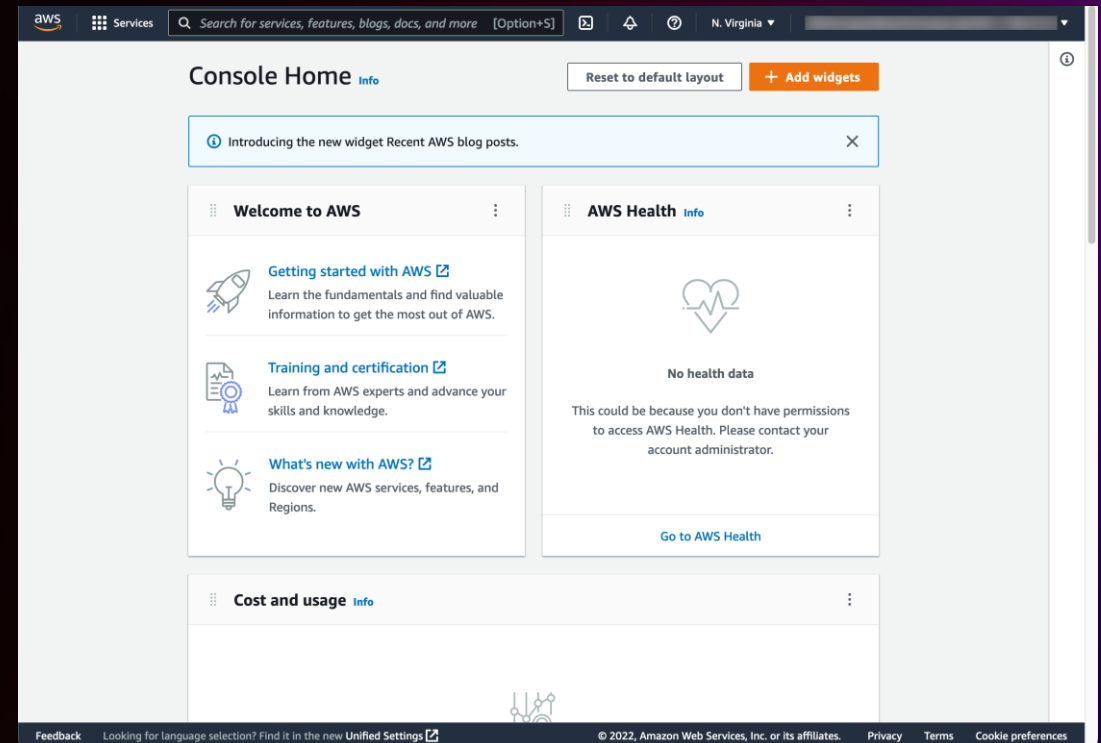
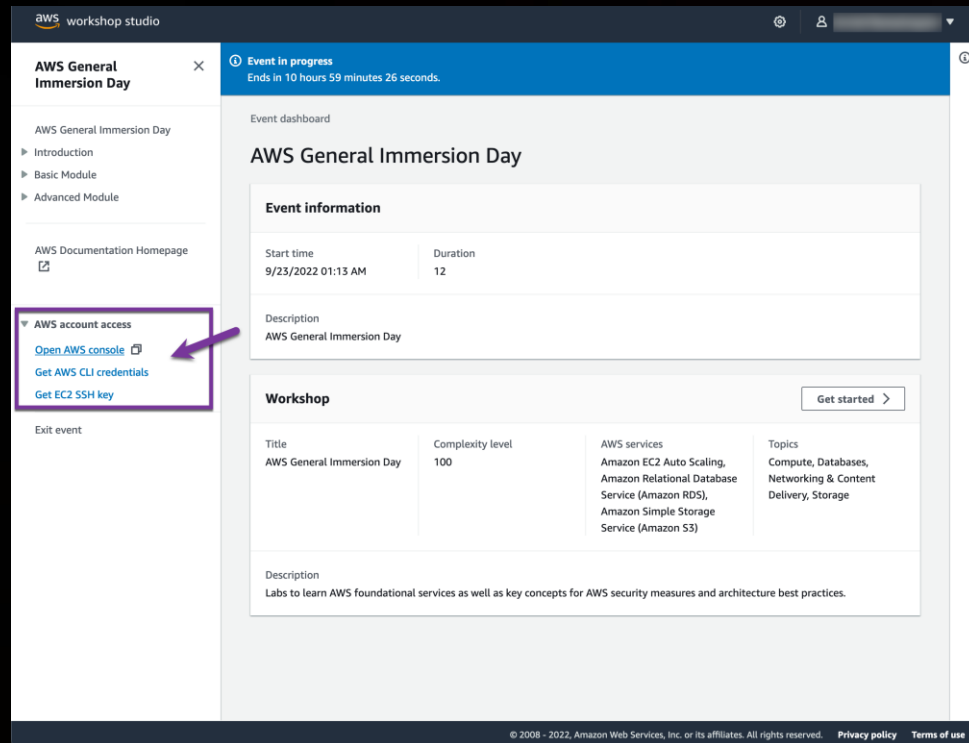
Join event

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# 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 with a right-pointing arrow is located at the bottom right of the workshop details section, 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 brown, stylized helmet with a white visor and the text 'IMMERSION DAYS' below it. Below the graphic, the text reads: '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.



# Thank you!

Re Alvarez Parmar  
reparmar@amazon.com



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survey in the **mobile app**



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