

AWS re:Invent

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

CMP224-R

How to create your DEV/TEST environment on Amazon Lightsail

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Agenda

Overview of Lightsail

Application development lifecycle

DevOps best practices

Scenario description

Build, build, build!



Amazon Lightsail

Virtual Private Servers (VPS), storage, databases,
and networking for a low, predictable price

What's in the bundle?

Every Lightsail instance includes:



Compute
(processor)



SSD-based
storage



Data transfer
allowance



Low
predictable
price

Additionally:

DNS management

Static IP

Content Delivery Network (CDN)

Object storage

Integration with other AWS services

Amazon Lightsail

RESOURCES



An easy way to run
your applications at a
low, predictable price



Virtual servers



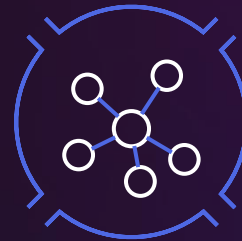
Containers



Object storage



Managed
databases

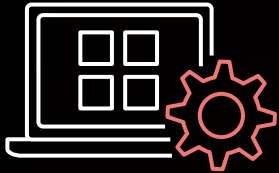


Networking



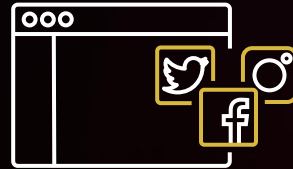
Connect other
AWS services

Lightsail is great for...



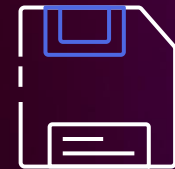
Simple web applications

Pre-configured development stacks for LAMP, Nginx, MEAN, Django, and Node.js



Websites

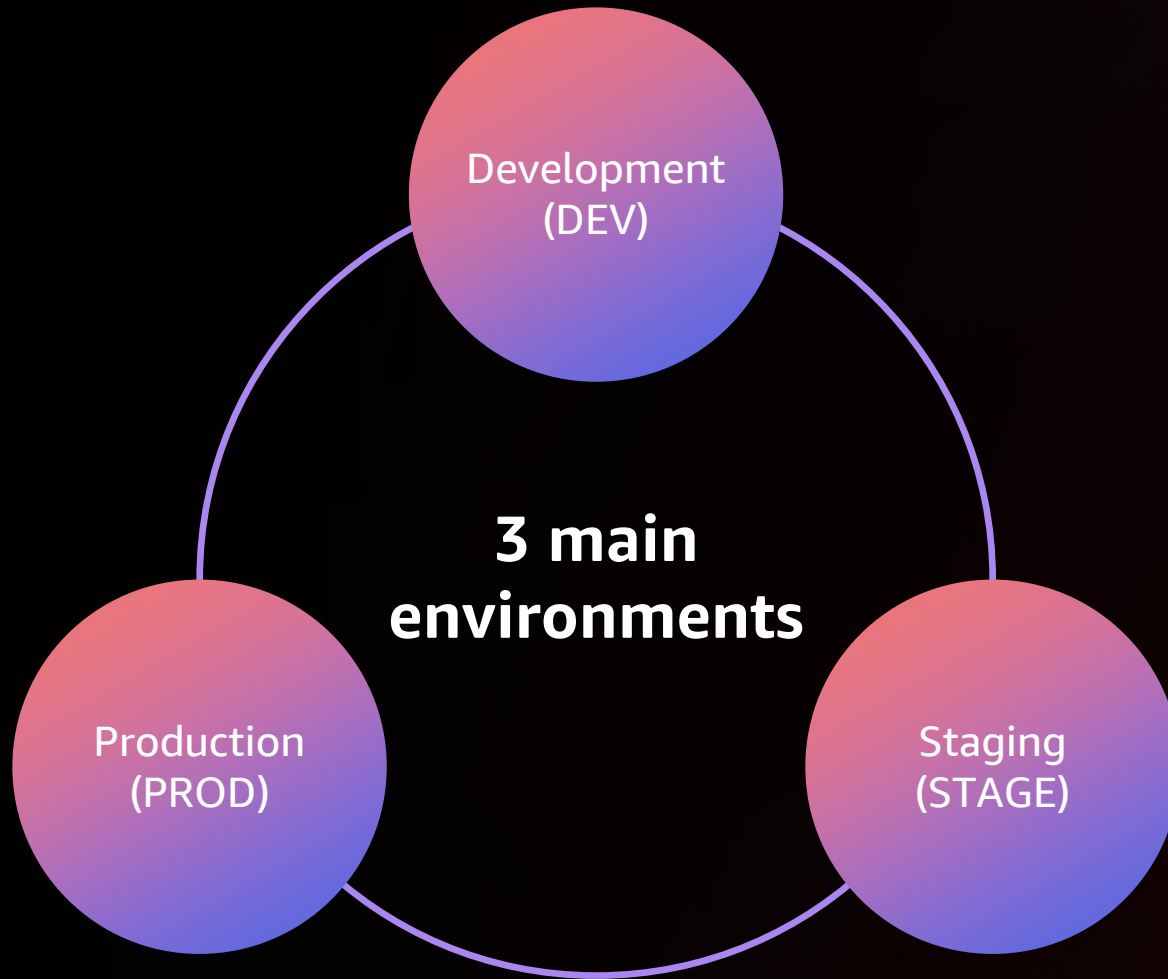
Pre-configured click-to-install applications including WordPress, Magento, Drupal, Ghost, Plesk, and Joomla



Business software

Launch your own applications like file sharing and storage, backups, financial and accounting software, and more

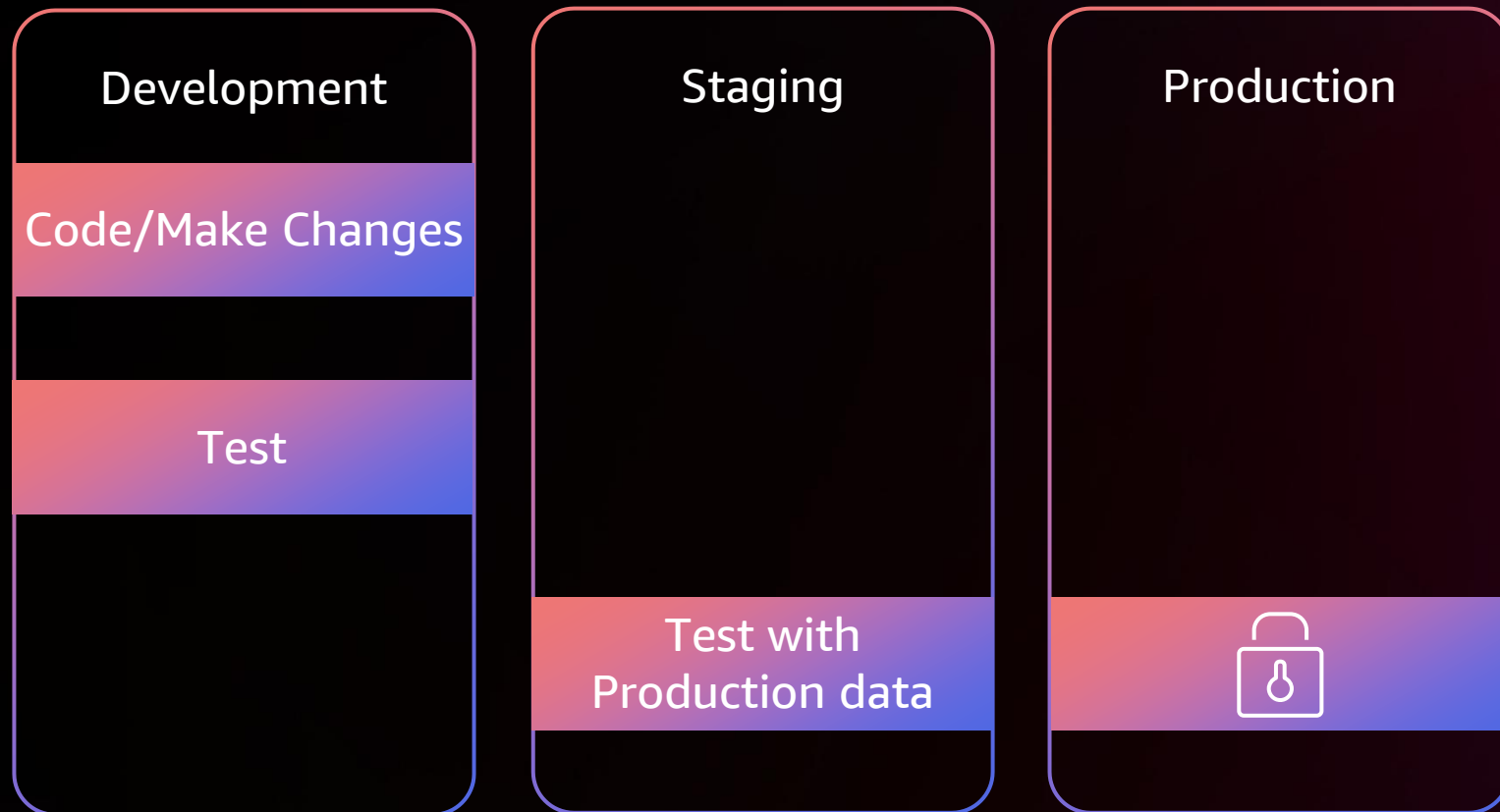
Application development lifecycle



RULE #1

**NEVER MAKE CHANGES
IN
PRODUCTION**

DEV/STAGE/PROD Environments

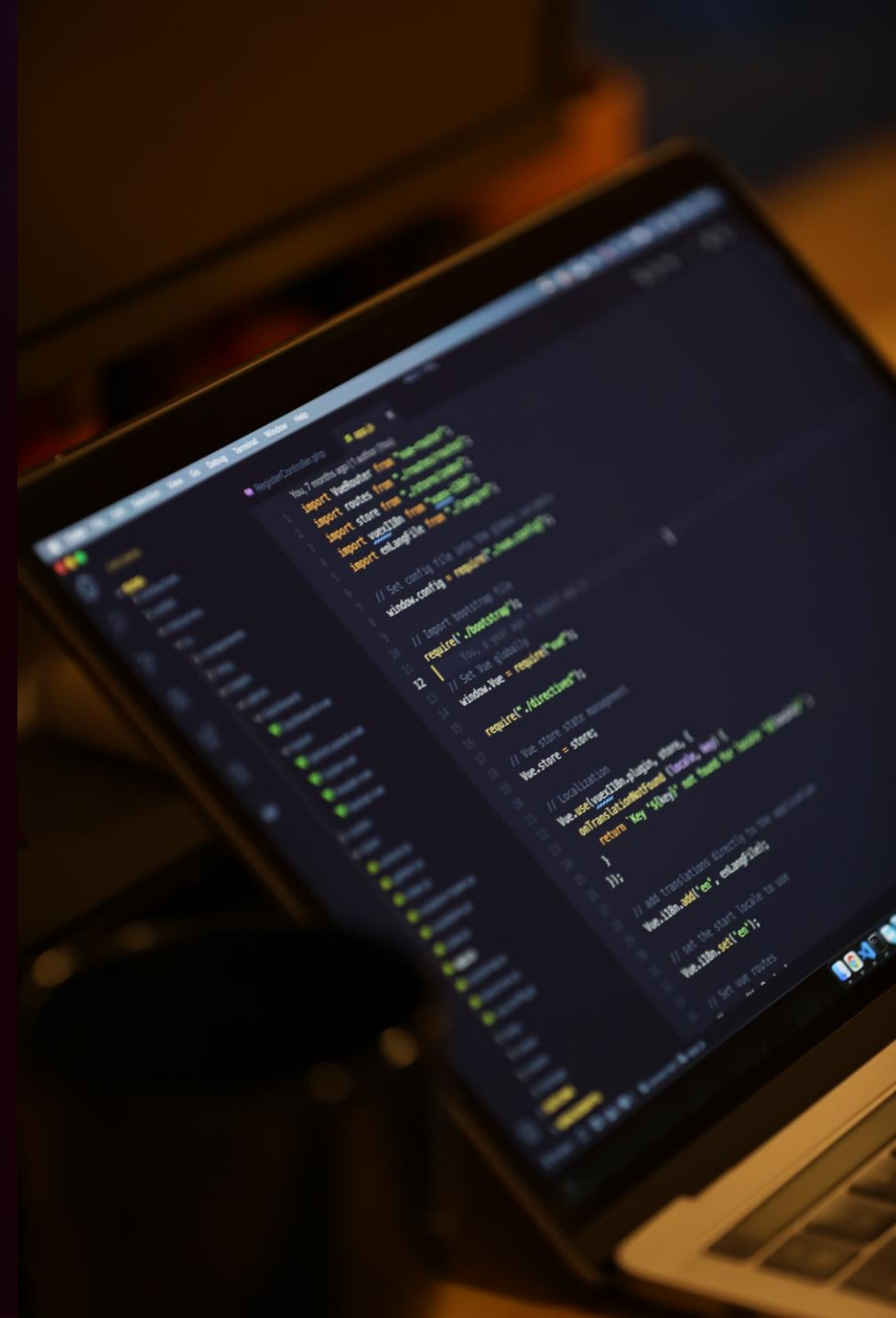


Development (DEV)

This is the environment where you make all of your code updates.

Nothing here is attached to the Production environment so a bug in the code or problems in the DEV environment will never affect customers.

Lots of testing should be done here to make sure everything is working before sending it to the next stage.



Staging (STAGE)

The staging environment is as close in similarity to the production environment as possible. This stage still does not touch any Production environment systems.

As many services as possible that are used in Production should also be mirrored in STAGE.

Here, all the final testing occurs before releasing code into Production. This is where all 'fit-and-finish' actions take place before going live.

```
<body>
  <div id="app">
    <todo-application>
      #shadow-root (open)
        <link rel="stylesheet" type="text/css" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
        <style>...</style>
        <nav class="navbar navbar-expand-lg">
        <main class="container">
          <todo-form>
            <style>...</style>
            <div class="card todo-form">
            </div>
          </todo-form>
          <hr>
          <todo-list ref="list">
            <style>...</style>
            <h2>Tasks:</h2>
            <ul ref="todos" class="list-group">
              <todo-task ref="task-1517176">...</todo-task>
              <todo-task ref="task-1517176">...</todo-task>
              <todo-task ref="task-1517176">...</todo-task>
              <todo-task ref="task-1517176">...</todo-task>
            </ul>
          </todo-list>
        </main>
      </todo-application>
    </div>
  </body>
</html>
```

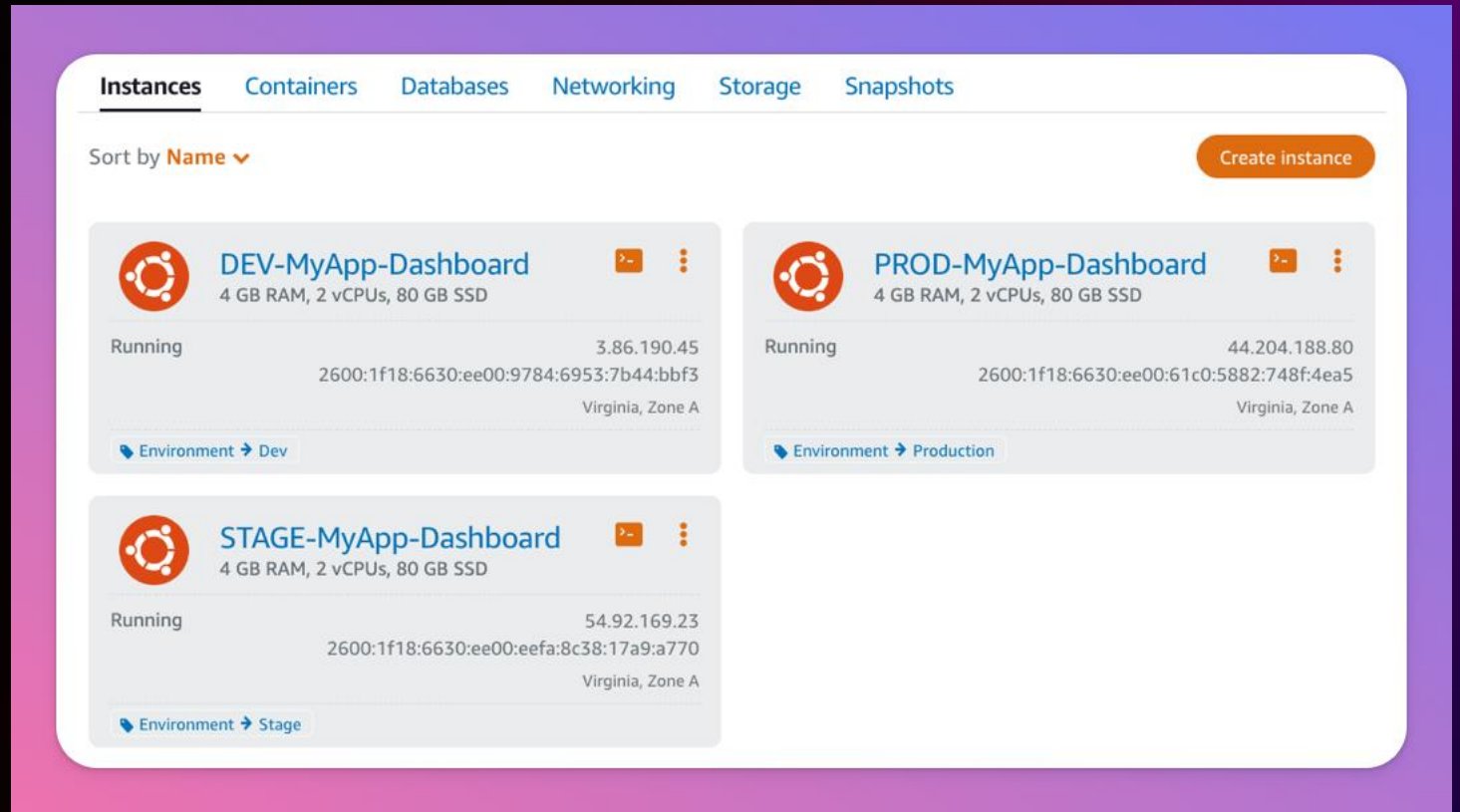
Production (PROD)

Although each environment is important,
**Production is the most important in that this is
what your users will interact with.**

This is the final environment for the code. All
changes here impact your customers.

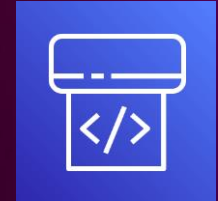
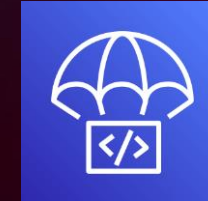
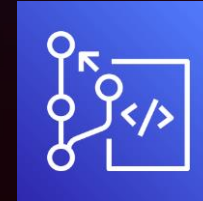
Example in Lightsail

- Each environment has its own instance
- Each instance is tagged for an environment
- Each instance is the exact same size/type (consistency)



Technologies you'll use:

AWS CodeCommit + AWS CodeDeploy + AWS CodePipeline



Git



HTML



Nginx Web Server



Scenario description

You have 2 hours to build the following solution:

- 1 Deploy and Configure CI/CD Pipeline
- 2 Create an environment for DEV and STAGE instances
- 3 Download and edit a website template
- 4 Commit changes to Git Repo
- 5 Deploy changes to Staging instance



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>



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

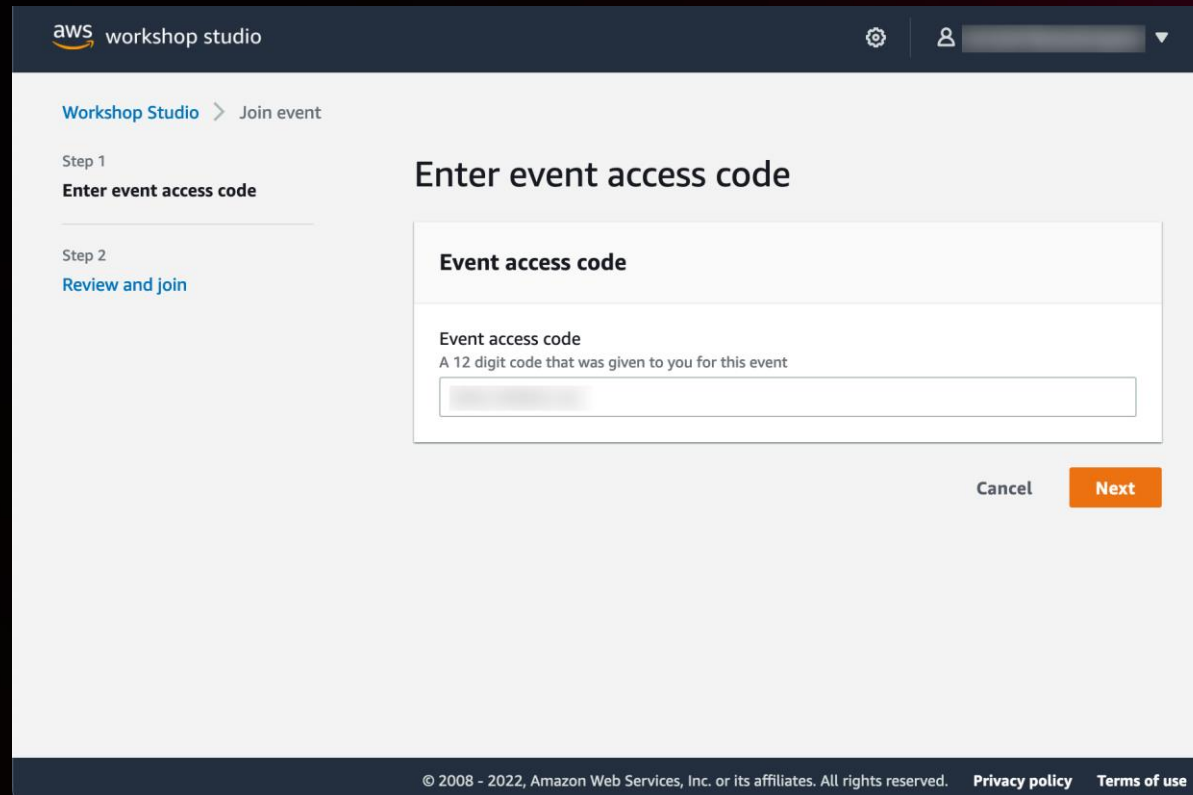
Amazon employee

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 one-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 sidebar shows 'Step 1: Enter event access code' as the current step and 'Step 2: Review and join' as the next step. The main content area is titled 'Enter event access code' and contains a form box. Inside the form box, the title 'Event access code' is followed by the instruction '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 box are 'Cancel' and 'Next' buttons.

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

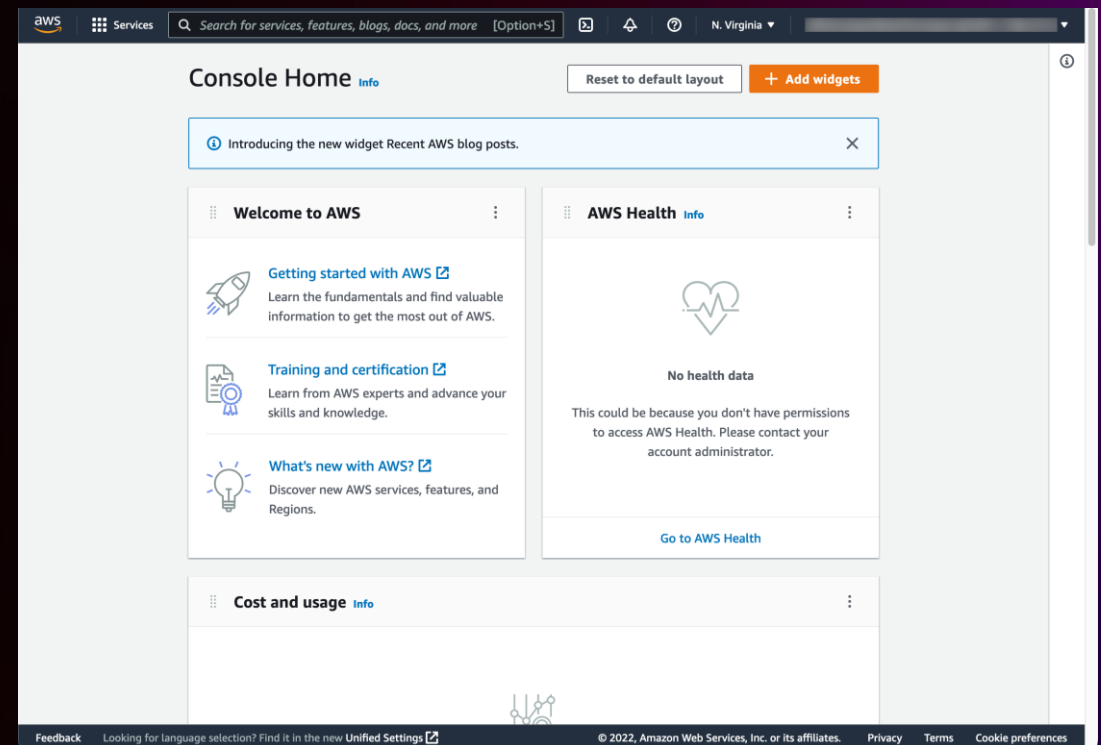
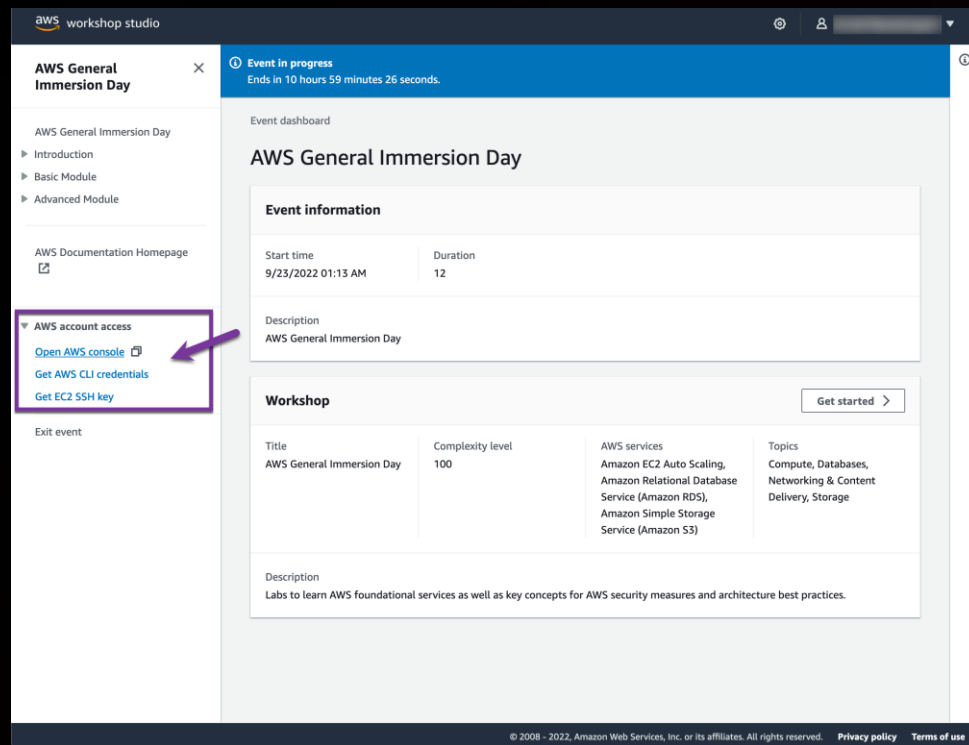
Join event

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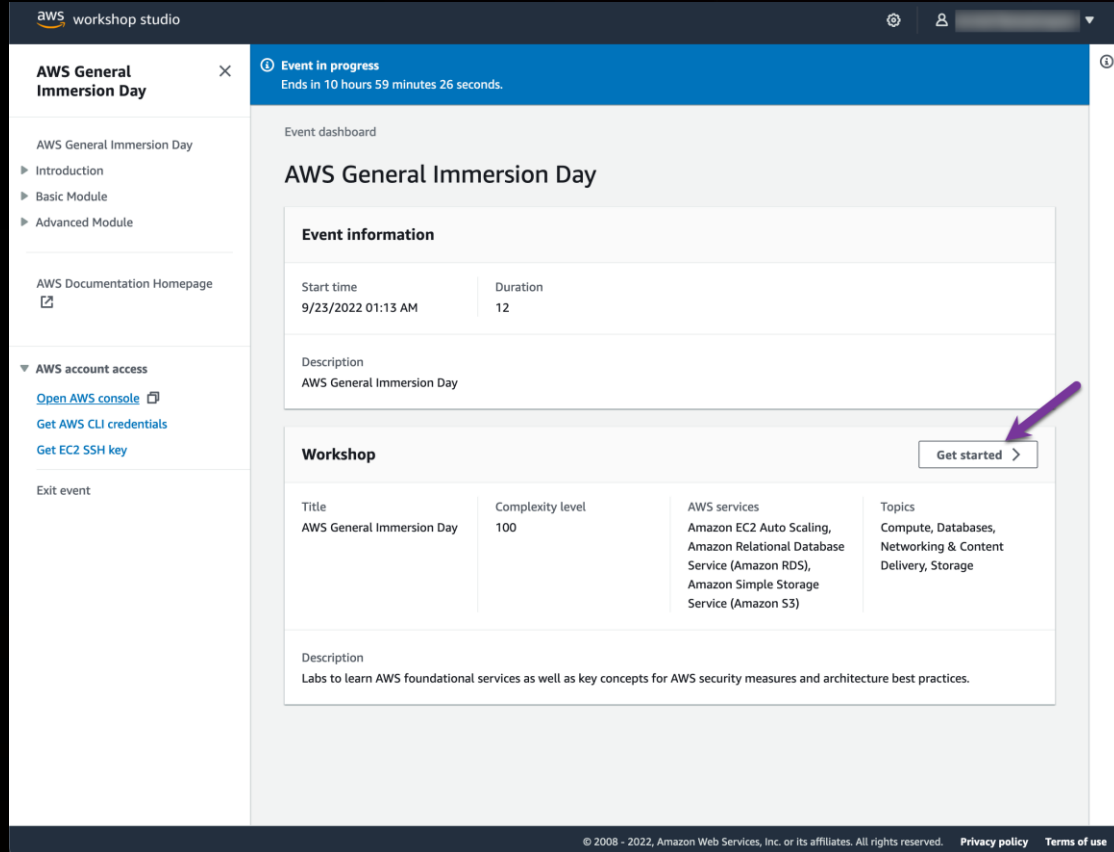
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Step 4: Access AWS account

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



Step 5: Get started with the workshop



aws workshop studio

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

Event dashboard

AWS General Immersion Day

Event information

Start time	9/23/2022 01:13 AM	Duration	12
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Description
AWS General Immersion Day

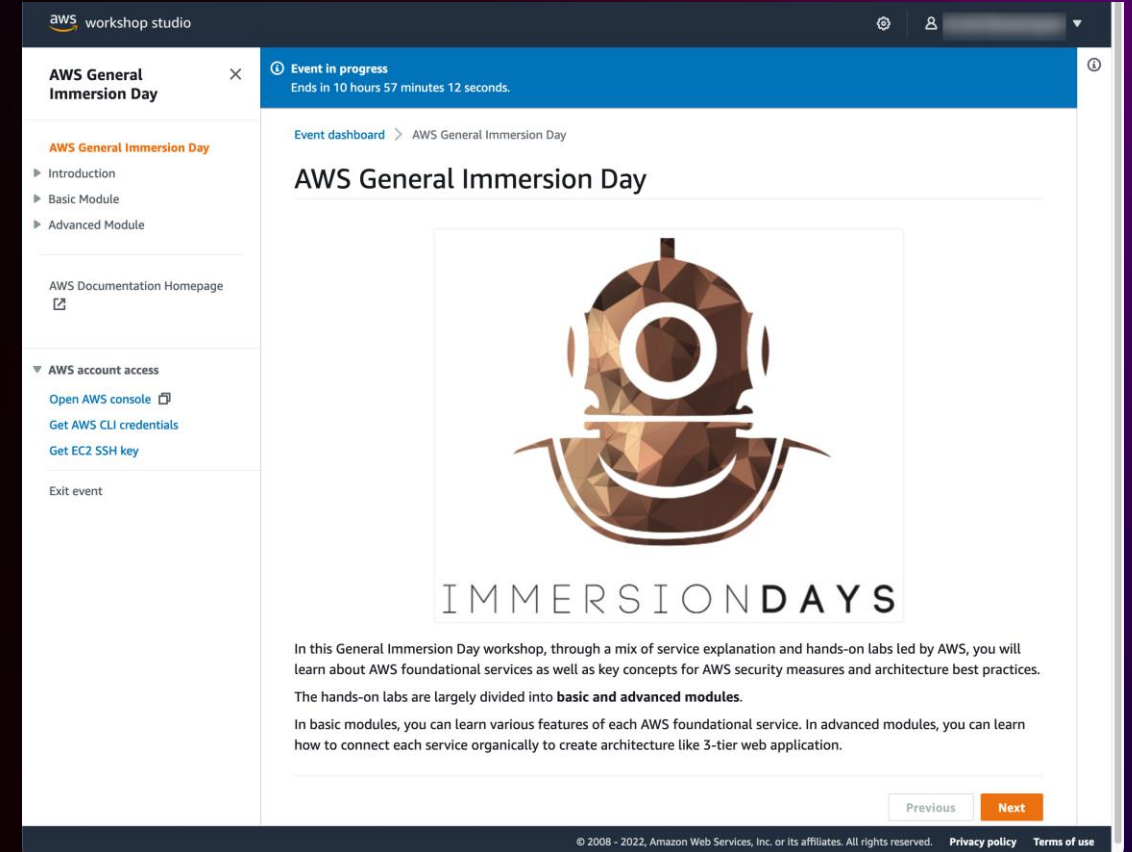
Workshop

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

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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