

AWS re:Invent

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

How to create your DEV/TEST environment on Amazon Lightsail

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AWS

Agenda

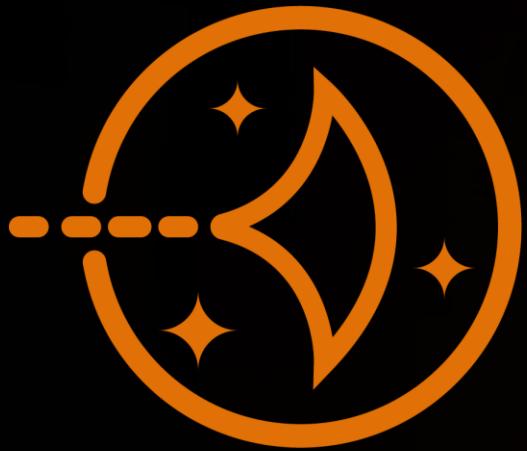
Overview of Lightsail

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:



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



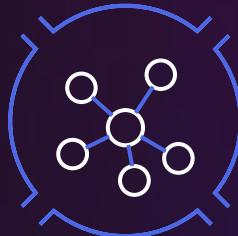
Containers



Object storage



Managed
databases

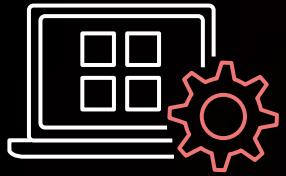


Networking



Connect other
AWS services

Lightsail is great for...



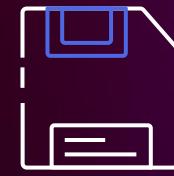
Simple web applications

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



Websites

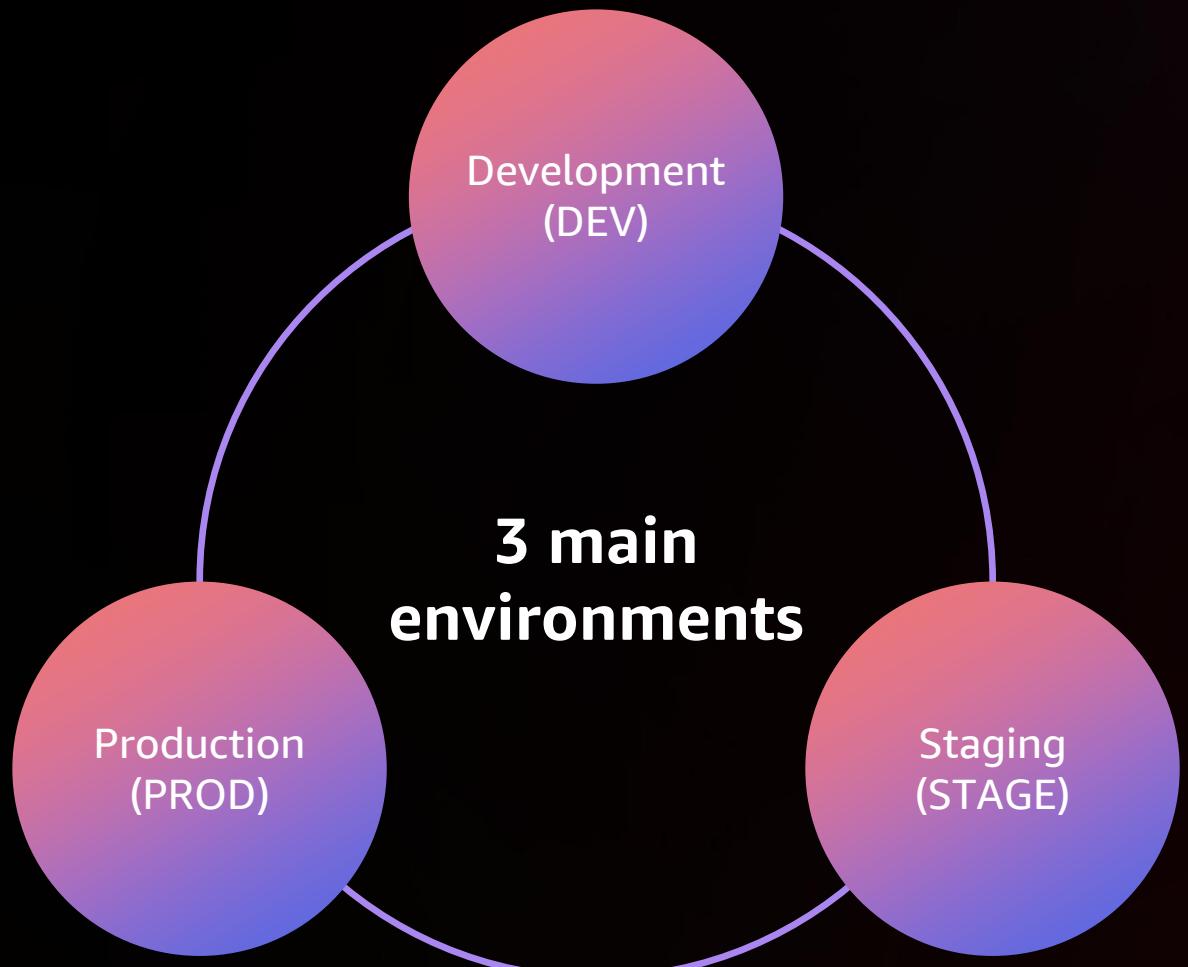
Pre-configured click-to-install applications including WordPress, Magento, Drupal, Ghost, Plesk, and Joomla



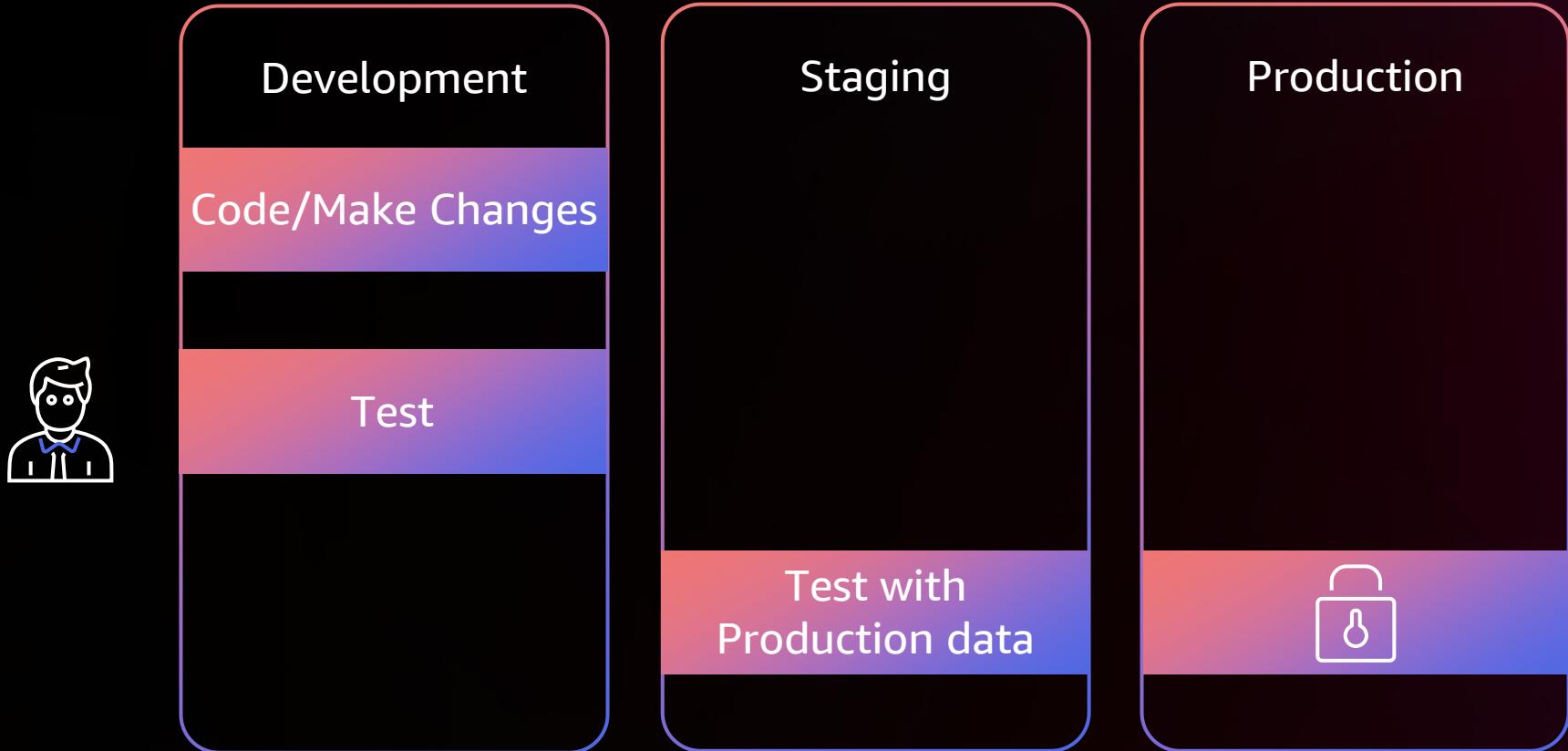
Business software

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

Application development lifecycle



DEV/STAGE/PROD Environments

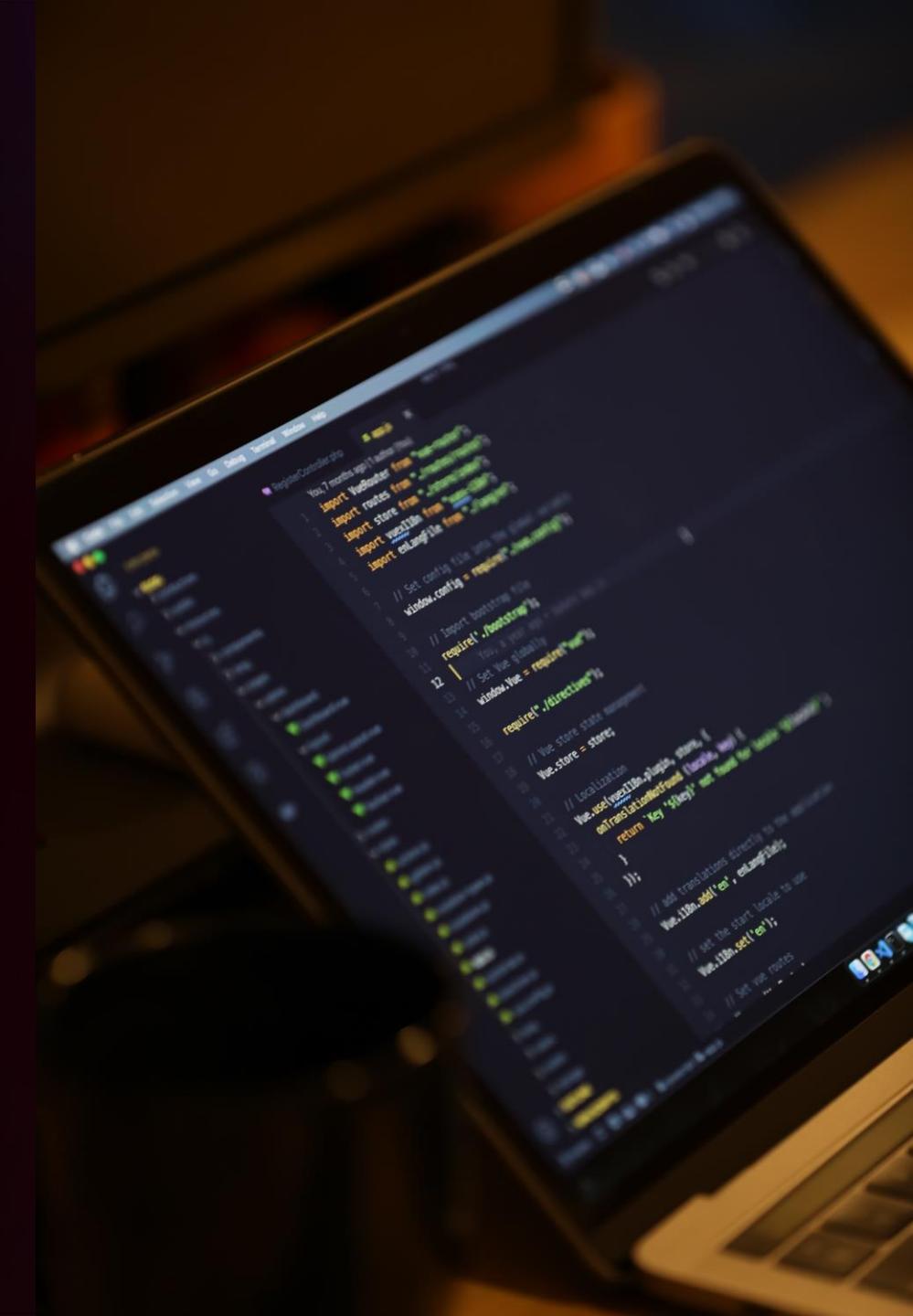


Development (DEV)

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 navbar-light">
          <main class="container">
            <todo-form>
              <style>...</style>
              <div class="card todo-form">
                </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> == $0
                <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>
      <script src="https://...>
    </#shadow-root (closed)>
  </div>
</body>
```

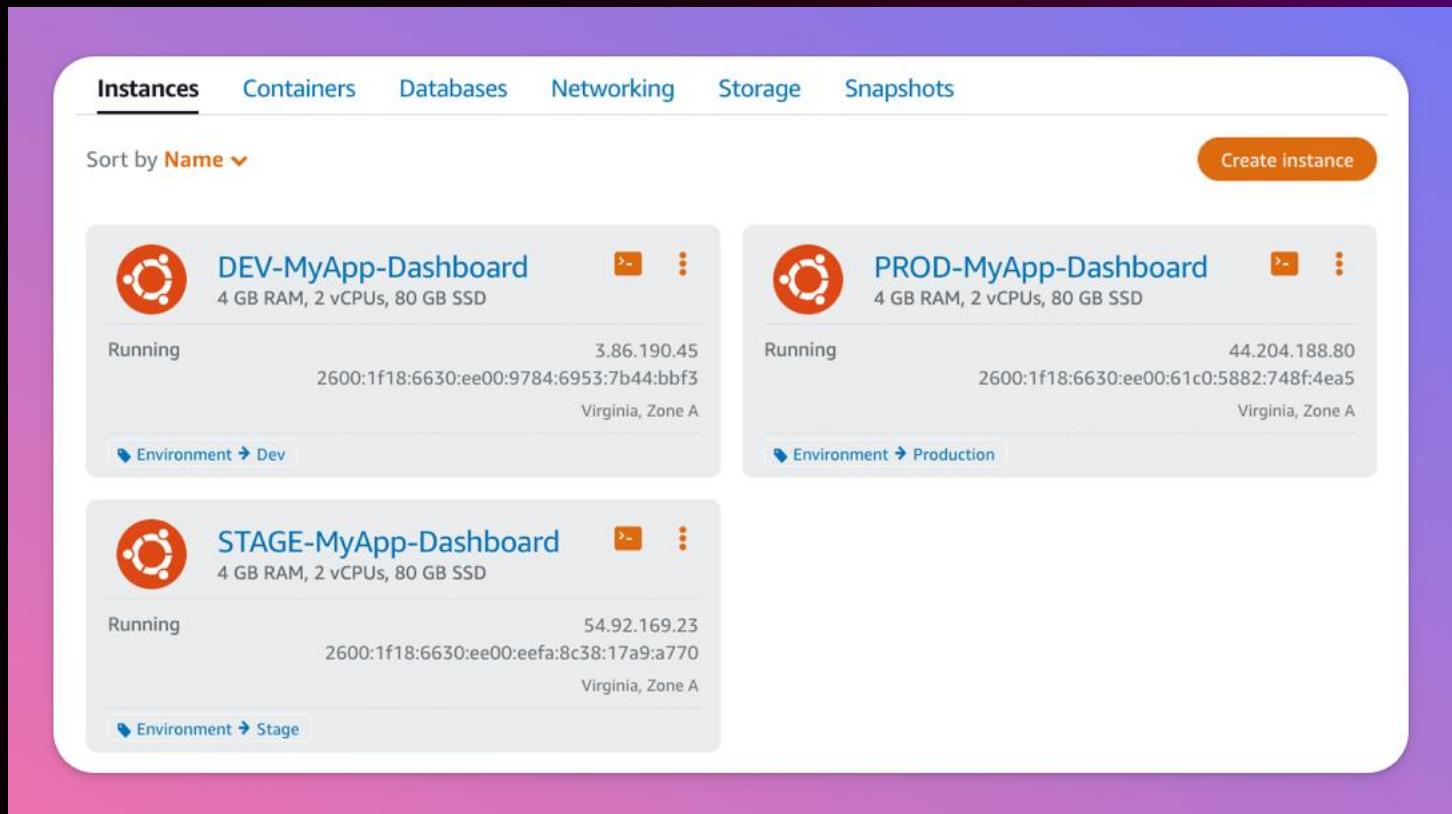
Production (PROD)

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.

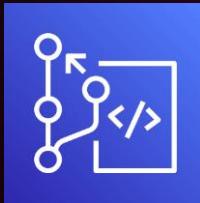
Example in Lightsail

- 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

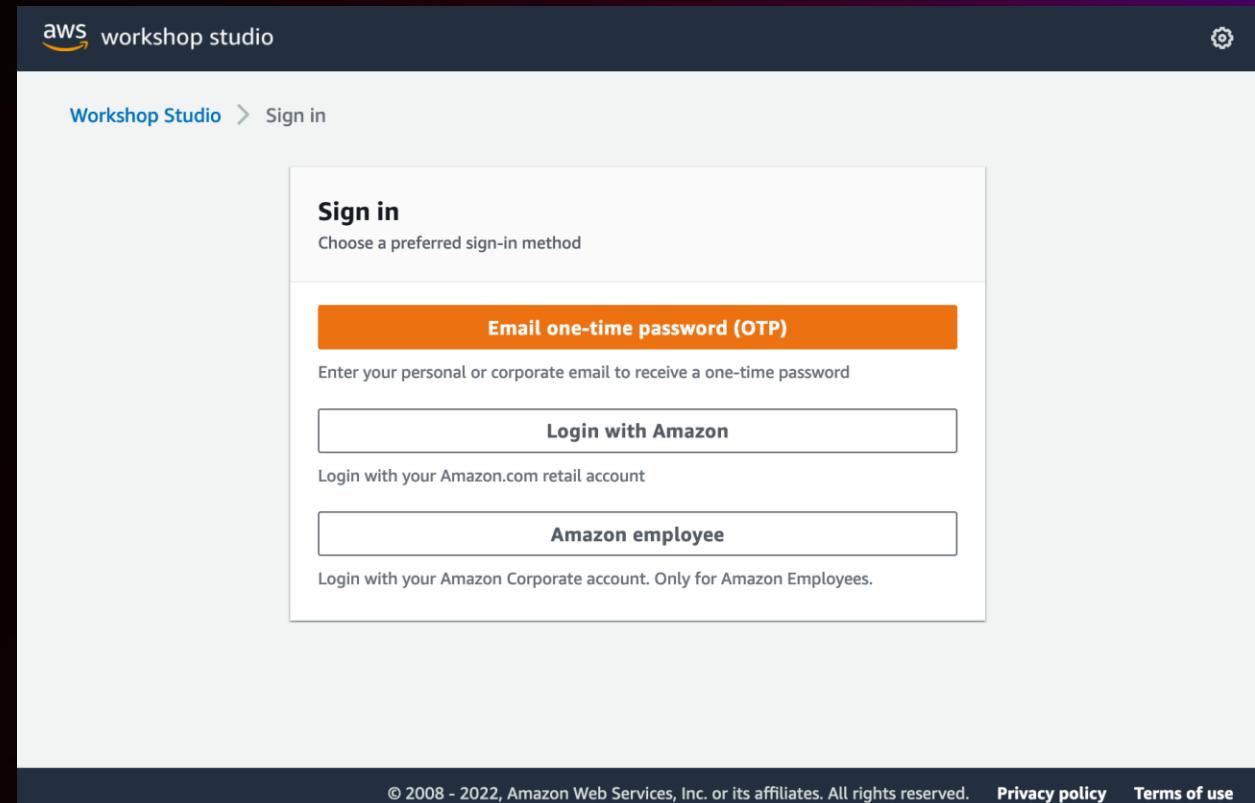
5 Deploy changes to Staging instance

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.

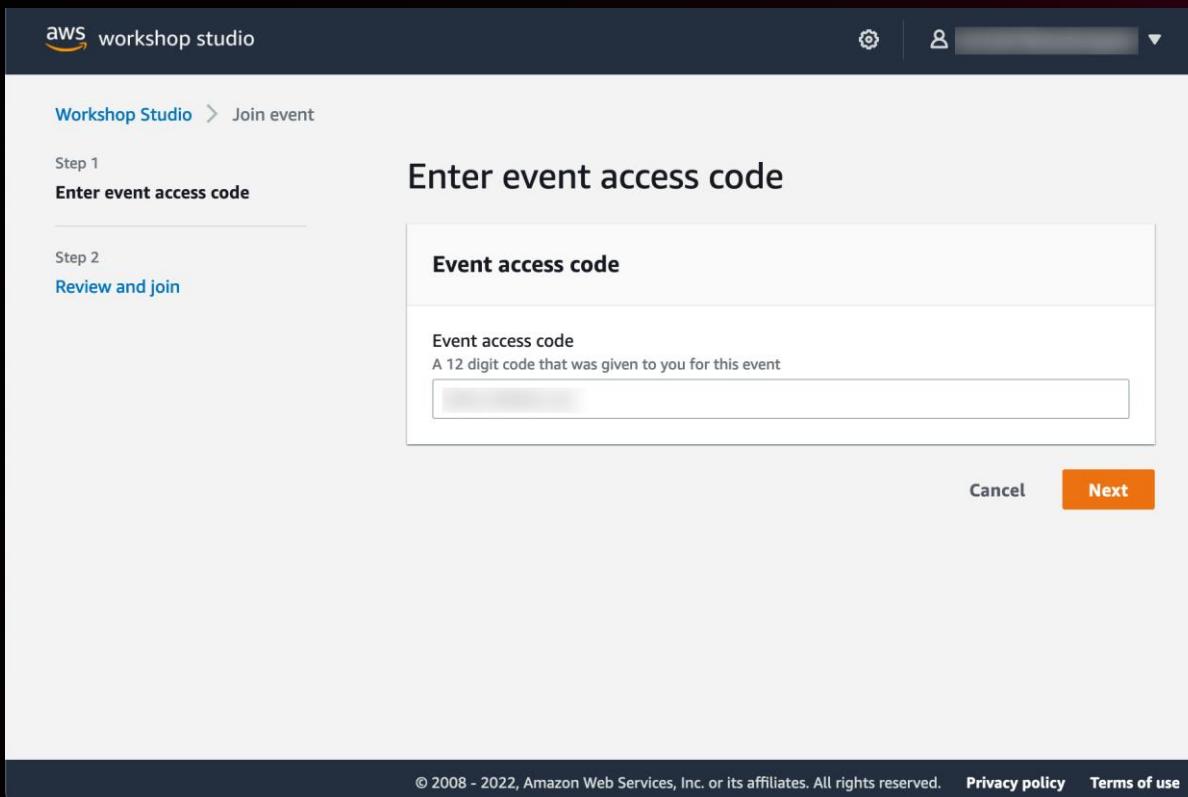
Step 1: Sign-In via your preferred method

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



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.



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

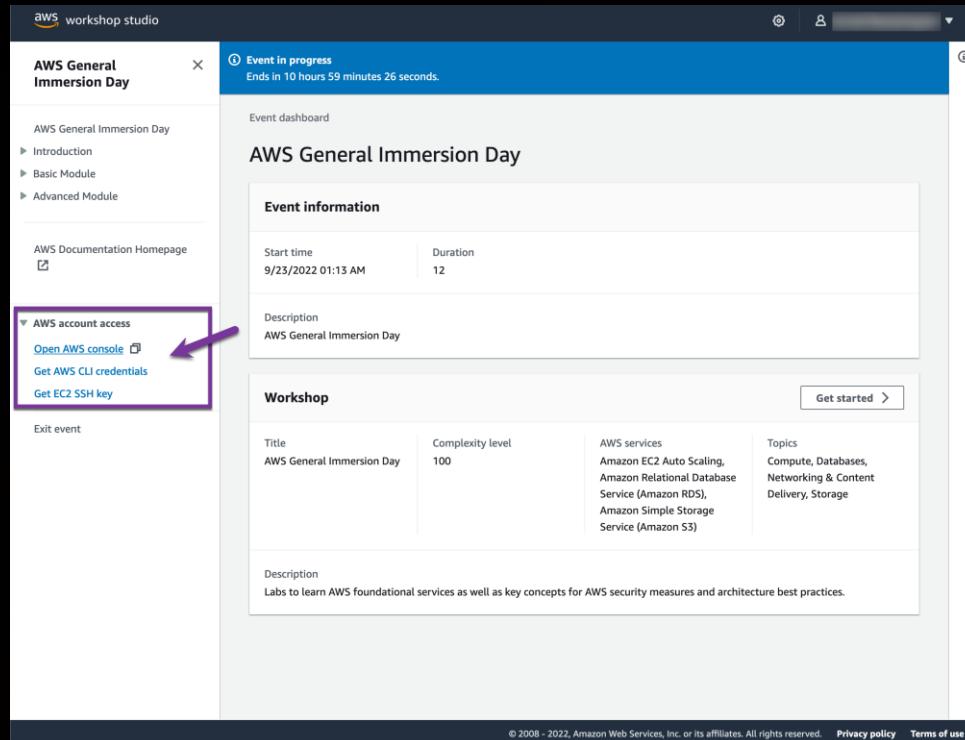
Cancel Previous **Join event**

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Step 4: Access AWS account

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



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

Workshop

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		

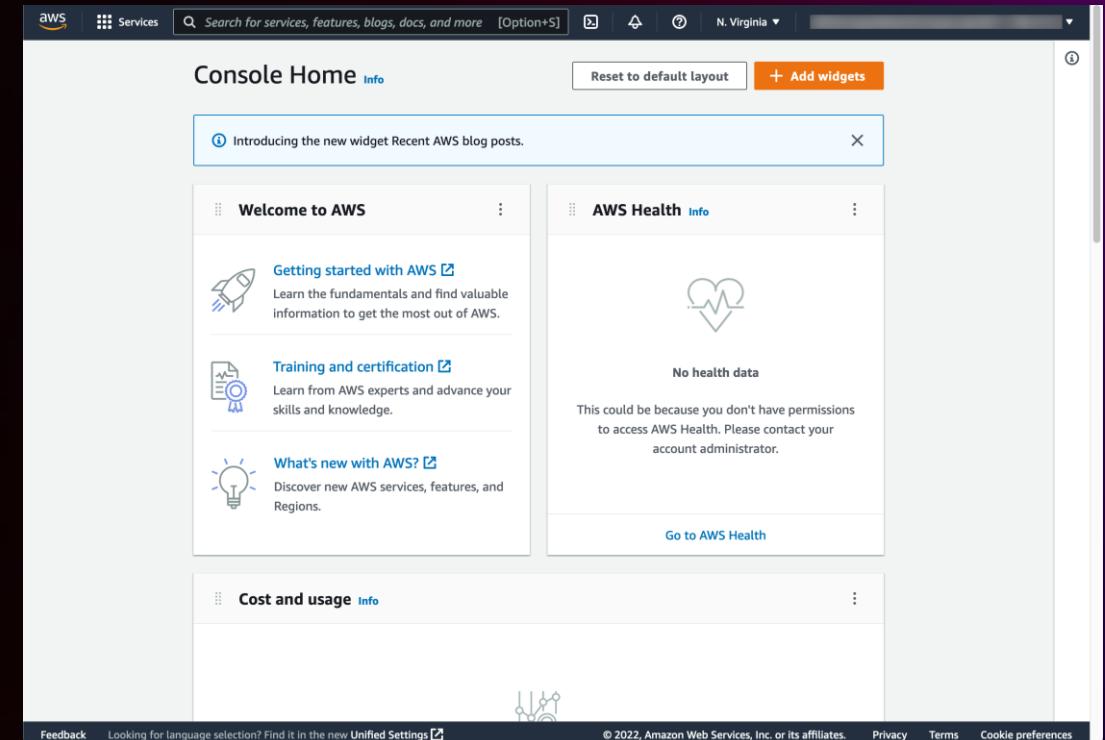
Description
Labs to learn AWS foundational services as well as key concepts for AWS security measures and architecture best practices.

AWS account access

- Open AWS console
- Get AWS CLI credentials
- Get EC2 SSH key

Exit event

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Console Home

Introducing the new widget Recent AWS blog posts.

Welcome to AWS

- Getting started with AWS
- Training and certification
- What's new with AWS?

AWS Health

No health data

This could be because you don't have permissions to access AWS Health. Please contact your account administrator.

[Go to AWS Health](#)

Cost and usage

Feedback Looking for language selection? Find it in the new [Unified Settings](#)

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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

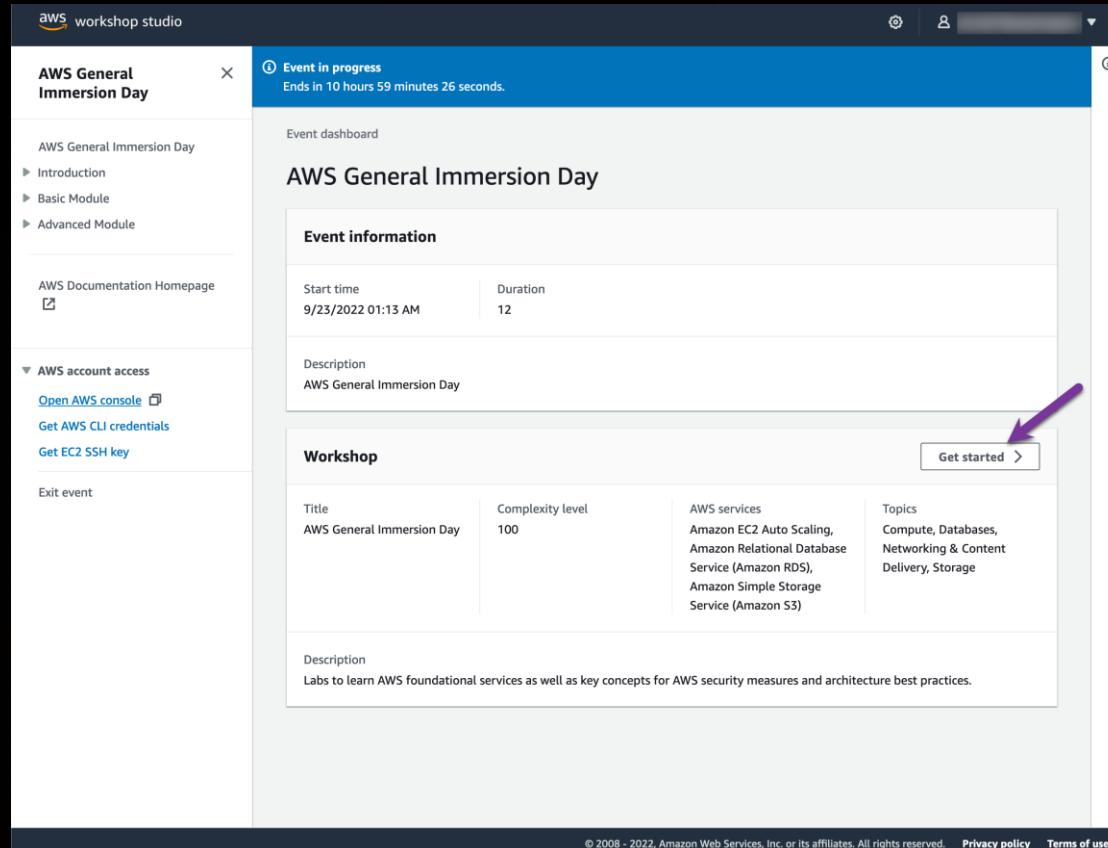
Description
AWS General Immersion Day

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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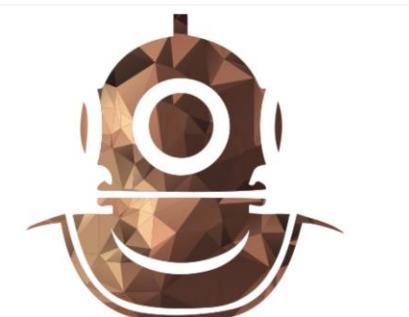
AWS workshop studio

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.

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Thank you!

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