

# Develop and Deploy Application Using Elastic Beanstalk with CDN (LAB-M13-01)

Version Control	
Document	Develop and Deploy Application Using Elastic Beanstalk with CDN
Owner	Ahmad Majeed Zahoory
Version	2.2
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Description of Change	Task steps updated

**Lab duration:** 30 minutes

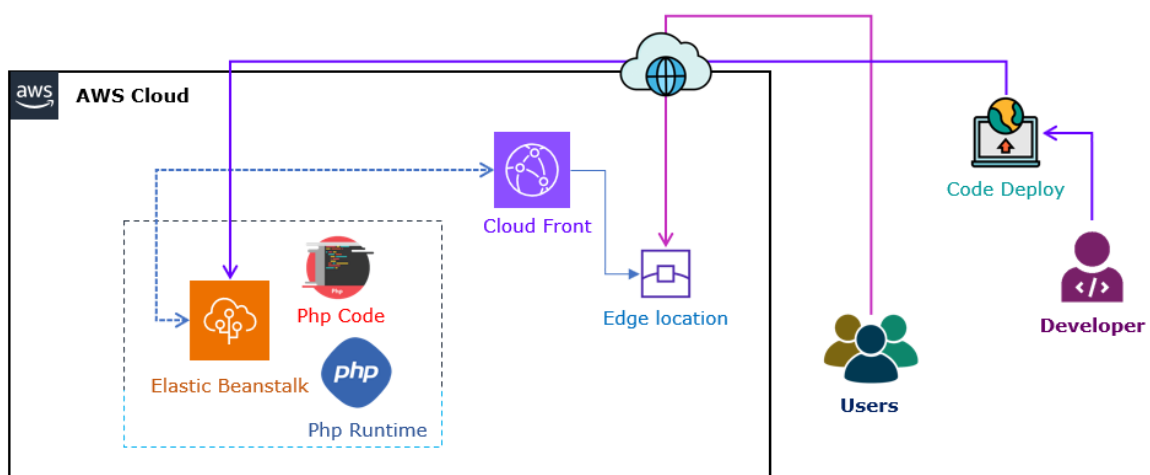
## Lab scenario

If you have several web apps, which include organisation website. This web app is used by the users who are spread across the globe.

In this lab, you will deploy the web app including database using AWS orchestration service. You also need to integrate the web app using the CDN service to access from the nearest location using low latency.

## Lab exercises

- Deploy web application using elastic beanstalk.
- Create content delivery network (cdn).



## Task 1: Develop the Php Code

In this task, you will develop the Php code to deploy using Elastic Beanstalk.

### Step 1: Develop the Code

1. **Unzip** the **eb-code-v1.0** (Php code).

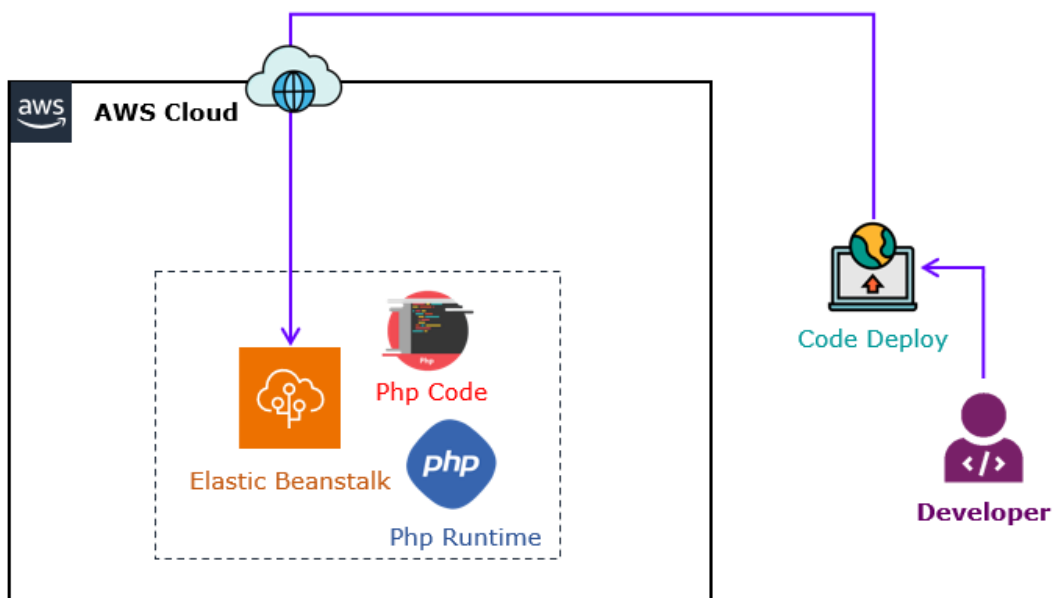
**Note:** **eb-code-v1.0** code is available with the **Lab manual**.

2. **Unzip** the **eb-code-v2.0** (Php code).

**Note:** **eb-code-v2.0** code is available with the **Lab manual**.

## Task 2: Create an Elastic Beanstalk

In this task, you will create the environment to deploy the Php code using the elastic beanstalk.



## Step 1: Create VPC

1. In the **AWS Management Console**, on the **Services** menu, search and select **CloudFormation**.
2. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
3. Select **Create stack** and configure:
  - a. In the **Create stack** page:
    - i. **Prepare template**: Select **Template is ready**.
    - ii. **Template source**: Select **Upload a template file**.
    - iii. **Choose file**: Click on **Choose file**.
      - a) **Navigate** and **select** the **LAB-EB.yaml** file.

**Note:** **lab-eb.yaml** template is provided with the **Lab manual**.

**Note:** AWS template **performing** the **following** tasks:

1. **Creating VPC** with **2 Web subnet** and **2 DB subnet**.
2. **Creating IAM Role** and attached **policies** for **ElasticBeanstalk**.

- iv. Select **Next**.
- b. In the **Specify stack details** page:
  - i. **Stack name**: Write **LAB-EB**.

**Note:** Leave other details as default.

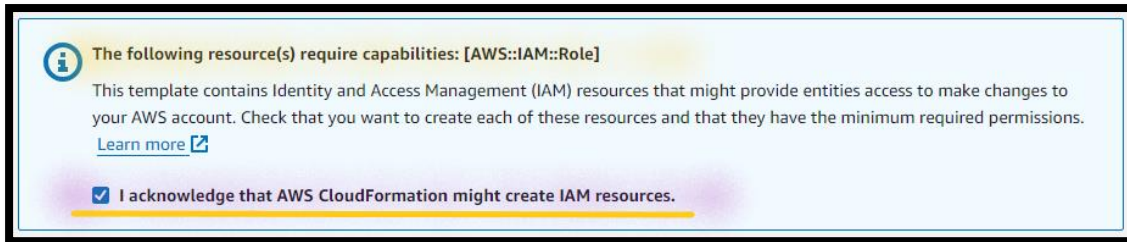
- ii. Select **Next**.
- c. In the **Configure stack options** page:

**Note:** Leave all the details as default.

- i. Select **Next**.

d. In the **Review and create** page:

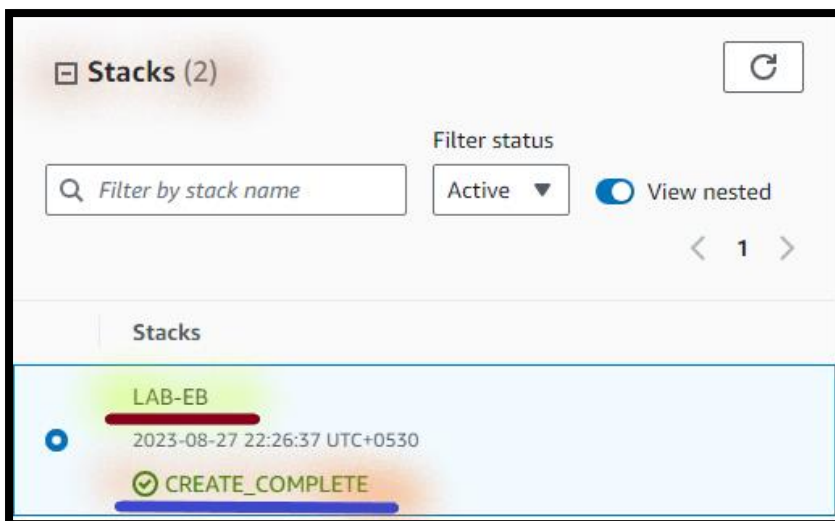
- i. **I acknowledge that AWS CloudFormation might create IAM resources:** **Enable** the **Checkmark**.



- ii. Select **Submit**.

**Note:** You can see the **Stack** status as **CREATE\_IN\_PROGRESS**.

**Note:** **Wait**, till you can see the **Stack** status as **CREATE\_COMPLETE**. You can **Refresh** your screen

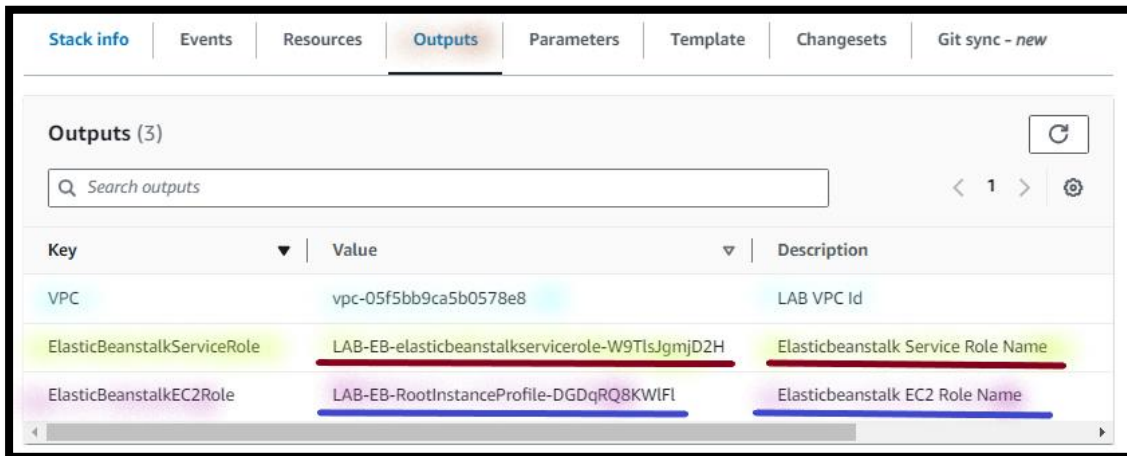


## Step 2: View the Output

4. **From** the **LAB-EB CloudFormation** console:
  - a. Select **Outputs**.

**Note:** **Copy** the **Elasticbeanstalks Service Role Name Value** in the **Notepad**.

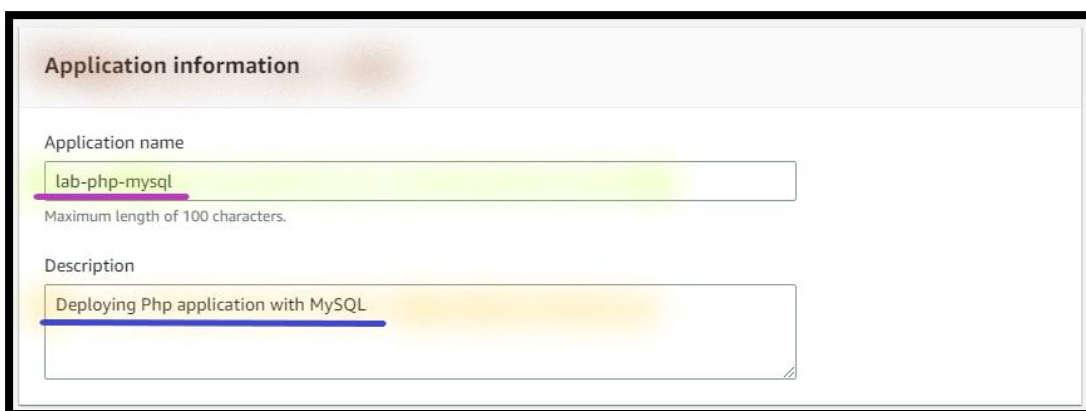
**Note:** Copy the **Elasticbeanstalk EC2 Role Name Value** in the **Notepad**.



Key	Value	Description
VPC	vpc-05f5bb9ca5b0578e8	LAB VPC Id
ElasticBeanstalkServiceRole	LAB-EB-elasticbeanstalkservicerole-W9TlsJgmjD2H	Elasticbeanstalk Service Role Name
ElasticBeanstalkEC2Role	LAB-EB-RootInstanceProfile-DGDqRQ8KWfI	Elasticbeanstalk EC2 Role Name

### Step 3: Create Application

5. In the **AWS Management Console**, on the **Services** menu, search and select **Elastic Beanstalk**.
6. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
7. Select **Applications**.
  - a. Select **Create application**.
    - i. **Application Name:** Write **lab-php-mysql**.
    - ii. **Description:** Write **Deploying Php application with MySQL**.



**Application information**

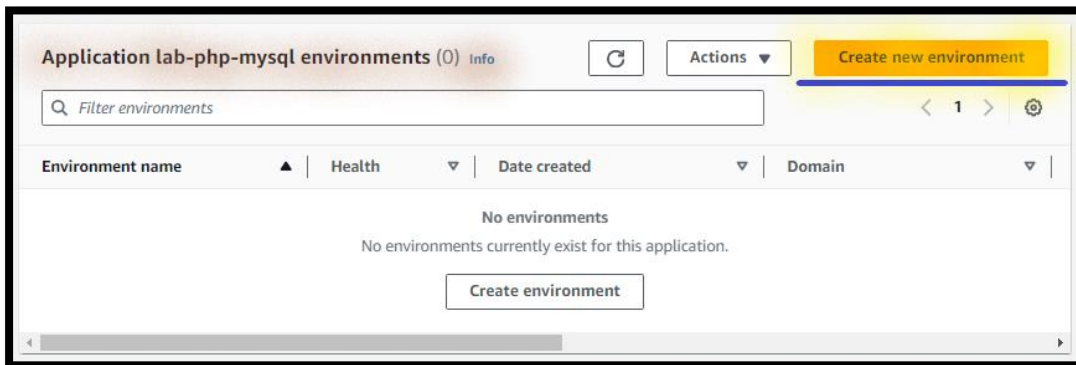
Application name  
lab-php-mysql  
Maximum length of 100 characters.

Description  
Deploying Php application with MySQL

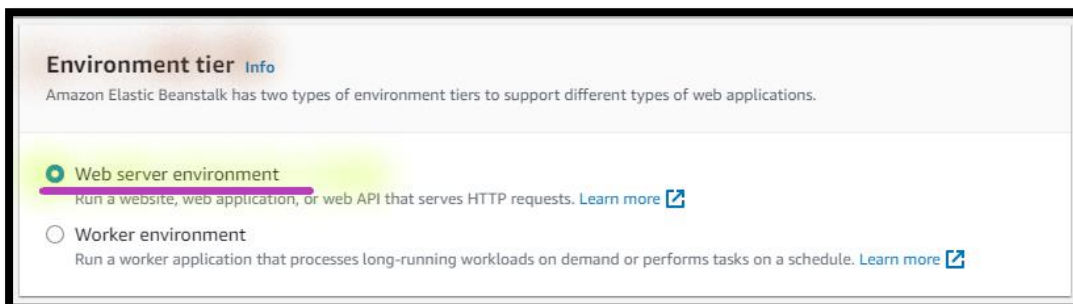
- iii. Select **Create**.

### Step 3: Create an Application Environment

8. From the **Elastic Beanstalk** console.
  - a. Select **Applications**.
    - i. Open **lab-php-mysql**.
      - a) Select **Create environment**.



- b. From the **Configure environment** page:
  - i. In the **Environment tier** section:
    - a) Select **Web server environment**.



- ii. In the **Environment information** section:
  - a) **Environment name**: Write **php-mysql-env**.
  - b) **Domain name**: Write **php-mysql-123**.
    - 1) Select **Check availability**.

**Note:** You can see the **Domain name** is **available**.

**Note:** **Replace 123** to make the **Domain name** **unique**.

**Environment information** [Info](#)

Choose the name, subdomain and description for your environment. These cannot be changed later.

Environment name

Must be from 4 to 40 characters in length. The name can contain only letters, numbers, and hyphens. It can't start or end with a hyphen. This name must be unique within a region in your account.

Domain  
 .us-east-1.elasticbeanstalk.com

[Check availability](#)

✓ php-mysql-123.us-east-1.elasticbeanstalk.com is available

iii. In the **Platform** section:

- a) **Platform:** Dropdown and select **PHP**.
- b) **Platform branch:** Dropdown and select **PHP 8.2 [Amazon Linux 2023]**.
- c) **Platform version:** Dropdown and select **Latest version**.

**Platform** [Info](#)

Platform type

☒ Managed platform  
 Platforms published and maintained by Amazon Elastic Beanstalk. [Learn more](#)

☐ Custom platform  
 Platforms created and owned by you. This option is unavailable if you have no platforms.

Platform

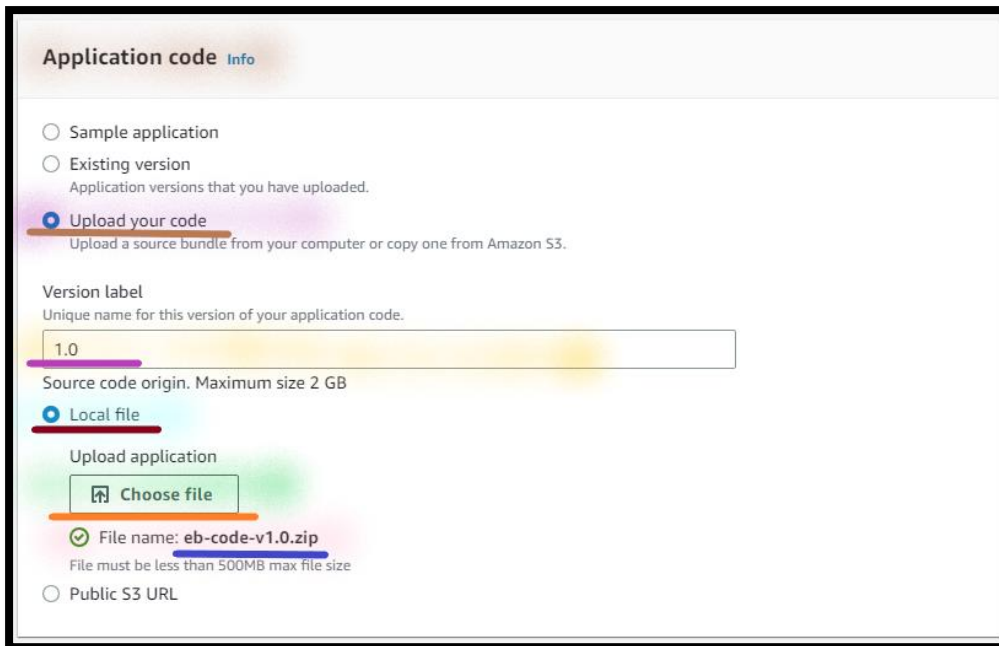
Platform branch

Platform version

iv. In the **Application code** section:

- a) Select **Upload your code**.
- b) **Version label:** Write **1.0**.
- c) Select **Local file**.
  - 1) **Choose file:** **Navigate** and select **eb-code-v1.0.zip**.

**Note:** **eb-code-v1.0** is available with the **Lab manual**.



**Application code** [Info](#)

☐ Sample application

☐ Existing version  
Application versions that you have uploaded.

☒ **Upload your code**  
Upload a source bundle from your computer or copy one from Amazon S3.

**Version label**  
Unique name for this version of your application code.

1.0

Source code origin. Maximum size 2 GB

☒ **Local file**

Upload application

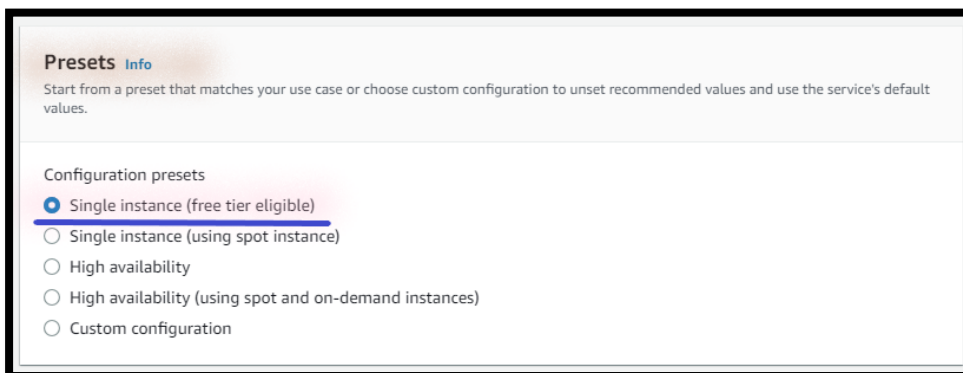
[Choose file](#)

✓ File name: **eb-code-v1.0.zip**  
File must be less than 500MB max file size

☐ Public S3 URL

v. In the **Preset** section:

a) Select **Single instance** (*free tier eligible*).



**Presets** [Info](#)

Start from a preset that matches your use case or choose custom configuration to unset recommended values and use the service's default values.

**Configuration presets**

☒ **Single instance (free tier eligible)**

☐ Single instance (using spot instance)

☐ High availability

☐ High availability (using spot and on-demand instances)

☐ Custom configuration

b) Select **Next**.

c. From the **Configure service access** page:

i. In the **Service access** section:

a) **Service role:** Select **Use an existing service role**.

1) **Existing service roles:** Dropdown and select **LAB-EB-elasticbeanstalk-ec2role-xx** role  
(which you have created in the previous step).



- 2) **EC2 key pair:** Dropdown and select **My-Dev-LAB-KP**.
- 3) **EC2 instance profile:** Dropdown and select **LAB-EB-RootInstanceProfile-xx** role (which you have created in the previous step).

**Service access**

IAM roles, assumed by Elastic Beanstalk as a service role, and EC2 instance profiles allow Elastic Beanstalk to create and manage your environment. Both the IAM role and instance profile must be attached to IAM managed policies that contain the required permissions. [Learn more](#)

**Service role**

☐ Create and use new service role

☒ Use an existing service role

**Existing service roles**

Choose an existing IAM role for Elastic Beanstalk to assume as a service role. The existing IAM role must have the required IAM managed policies.

LAB-EB-elasticbeanstalkservicerole-COUoCLlbyrNb

**EC2 key pair**

Select an EC2 key pair to securely log in to your EC2 instances. [Learn more](#)

My-Dev-LAB-KP

**EC2 instance profile**

Choose an IAM instance profile with managed policies that allow your EC2 instances to perform required operations.

LAB-EB-RootInstanceProfile-n8FQUfray14s

[View permission details](#)

b) Select **Next**.

d. From the **Set up networking, database, and tags** page:

i. In the **Virtual Private Cloud** section:

a) **VPC:** Dropdown and select **EB VPC**.

**Virtual Private Cloud (VPC)**

**VPC**

Launch your environment in a custom VPC instead of the default VPC. You can create a VPC and subnets in the VPC management console. [Learn more](#)

vpc-090a3d8d47a7508a4 | (192.168.0.0/22) | EB VPC

[Create custom VPC](#)

ii. In the **Instance settings** section:

a) **Instance subnet:**

1) Select **Web Subnet-1**.

2) Select **Web Subnet-2**.

**Instance settings**

Choose a subnet in each AZ for the instances that run your application. To avoid exposing your instances to the Internet, run your instances in private subnets and load balancer in public subnets. To run your load balancer and instances in the same public subnets, assign public IP addresses to the instances. [Learn more](#)

**Public IP address**  
Assign a public IP address to the Amazon EC2 instances in your environment.

☐ Activated

**Instance subnets**

Filter instance subnets

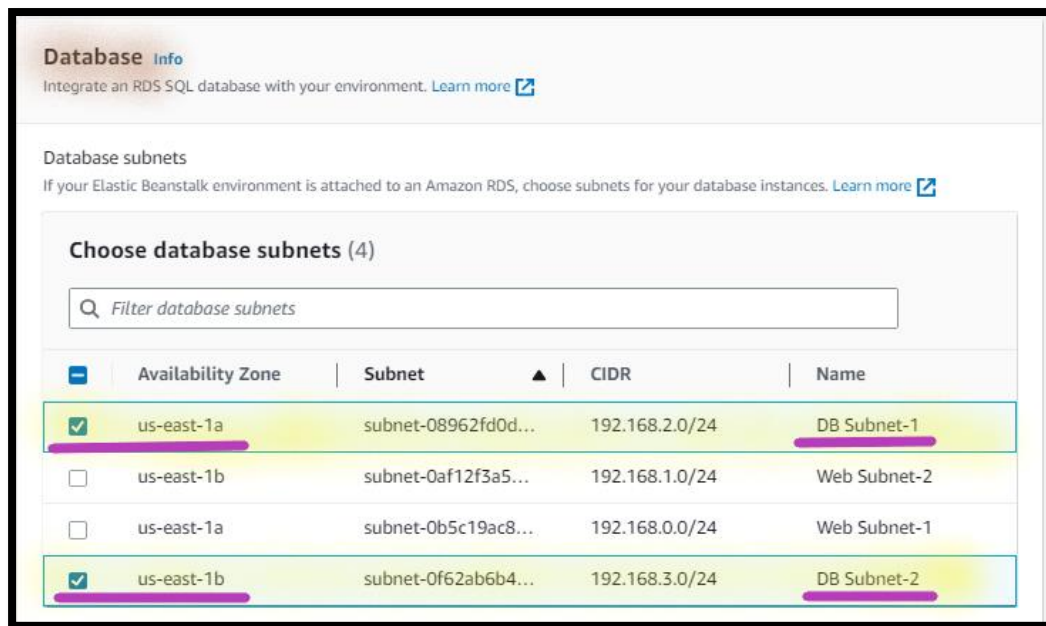
	Availability Zone	Subnet	CIDR	Name
<input type="checkbox"/>	us-east-1a	subnet-08962fd0d...	192.168.2.0/24	DB Subnet-1
<input checked="" type="checkbox"/>	us-east-1b	subnet-0af12f3a5...	192.168.1.0/24	Web Subnet-2
<input checked="" type="checkbox"/>	us-east-1a	subnet-0b5c19ac8...	192.168.0.0/24	Web Subnet-1
<input type="checkbox"/>	us-east-1b	subnet-0f62ab6b4...	192.168.3.0/24	DB Subnet-2

iii. In the **Database** section:

a) **Choose database subnet:**

1) Select **Db Subnet-1**.

2) Select **Db Subnet-2**.



b) **Enable database:** **Enable** the **Option**.

- 1) **Snapshot:** Dropdown and select **None**.
- 2) **Engine:** Dropdown and select **mysql**.
- 3) **Engine version:** Dropdown and select **Default version**.
- 4) **Instance class:** Dropdown and select **db.t3.micro**.
- 5) **Storage:** Write **5** (GB).

☒ Enable database

**Restore a snapshot - optional**  
Restore an existing snapshot from a previously used database.

Snapshot  
None

**Database settings**  
Choose an engine and instance type for your environment's database.

Engine  
mysql

Engine version  
8.0.35

Instance class  
db.t3.micro

Storage  
Choose a number between 5 GB and 1024 GB.  
5 GB

6) **User:** Write **master**.

7) **Password:** Write **lab-password**.

8) **Availability:** Dropdown and select **Low (one AZ)**.

Username  
master

Password  
\*\*\*\*\*

Availability  
Low (one AZ)

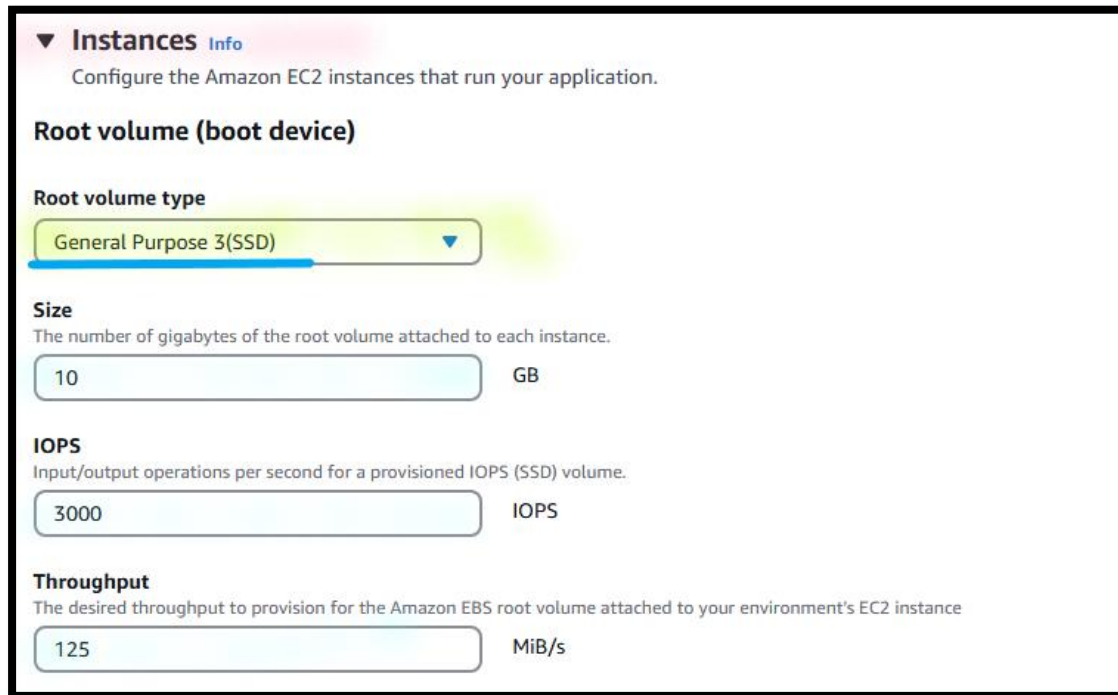
**Note:** Leave the other details as default.

c) Select **Next**.

e. From the **Configure instance traffic and scaling** page:

i. In the **Instances** section:

a) **Root volume type**: Dropdown and select **General Purpose 3(SSD)**.



▼ **Instances** [Info](#)

Configure the Amazon EC2 instances that run your application.

**Root volume (boot device)**

**Root volume type**

General Purpose 3(SSD) ▼

**Size**

The number of gigabytes of the root volume attached to each instance.

10 GB

**IOPS**

Input/output operations per second for a provisioned IOPS (SSD) volume.

3000 IOPS

**Throughput**

The desired throughput to provision for the Amazon EBS root volume attached to your environment's EC2 instance

125 MiB/s

ii. In the **Capacity** section:

a) **Instance types**:

1) Remove the **t3.small** instances.

**Note:** Ensure, you can **only** see the **t3.micro** instance under **Instance types**.



Instance types

Add instance types for your fleet. Change the order that the instances are in to set the preferred launch order. This only affects On-Demand instances. We recommend you include at least two instance types. [Learn more](#)

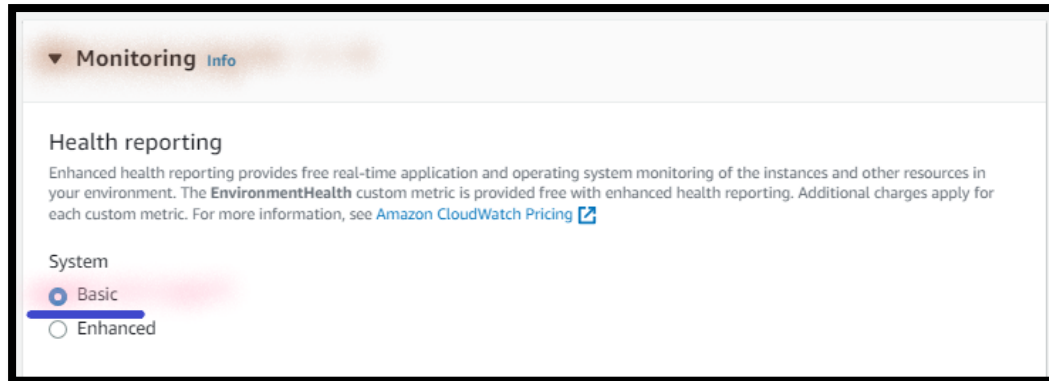
Choose x86 instance types ▼

t2.micro X

**Note:** Leave the other details as default.

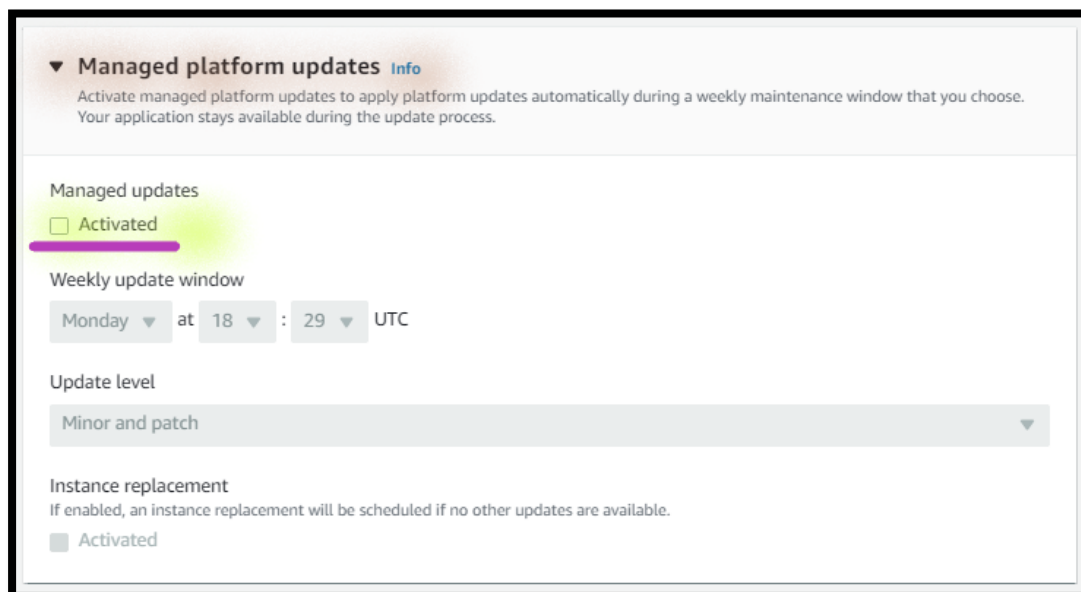
b) Select **Next**.

- f. From the **Configure updates, monitoring, and logging** page:
- i. In the **Monitoring** section:
- a) **System:** Select **Basic**.



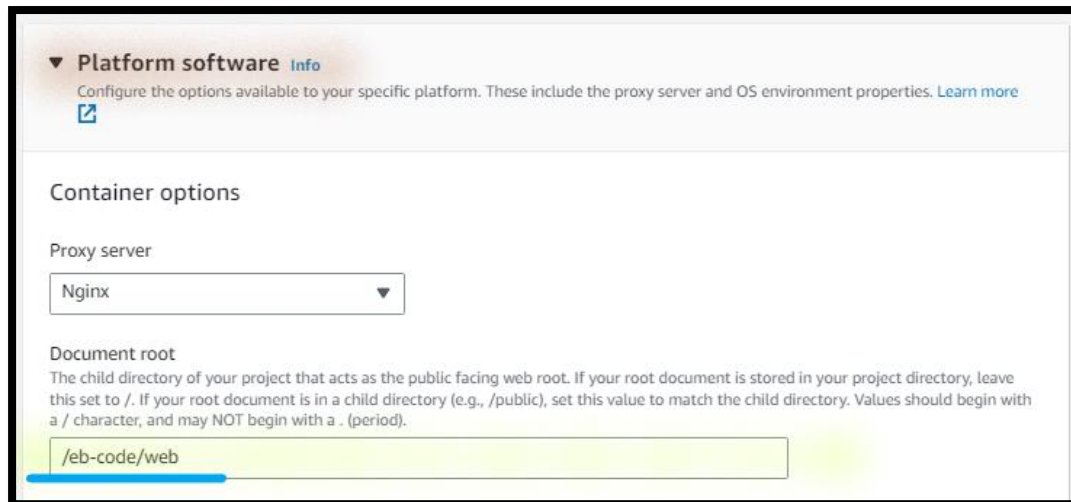
The screenshot shows the 'Monitoring' section of the AWS console. It features a 'Health reporting' header with a description of enhanced health reporting. Below this, there is a 'System' section with two radio button options: 'Basic' (which is selected) and 'Enhanced'.

- ii. In the **Managed platform updates** section:
- a) **Managed updates:** **Disable** the **Checkmark**.



The screenshot shows the 'Managed platform updates' section of the AWS console. It includes a description of managed updates. The 'Managed updates' section has a checkbox labeled 'Activated' which is currently unchecked. Below this, the 'Weekly update window' is set to 'Monday at 18 : 29 UTC'. The 'Update level' is set to 'Minor and patch'. The 'Instance replacement' section has a checkbox labeled 'Activated' which is currently checked.

- iii. In the **Platform software** section:
- a) **Document root:** Write **/eb-code/web**.



▼ Platform software [Info](#)

Configure the options available to your specific platform. These include the proxy server and OS environment properties. [Learn more](#)

Container options

Proxy server

Nginx ▼

Document root

The child directory of your project that acts as the public facing web root. If your root document is stored in your project directory, leave this set to /. If your root document is in a child directory (e.g., /public), set this value to match the child directory. Values should begin with a / character, and may NOT begin with a . (period).

/eb-code/web

**Note:** Leave the other details as default.

b) Select **Next**.

g. From the **Review** page:

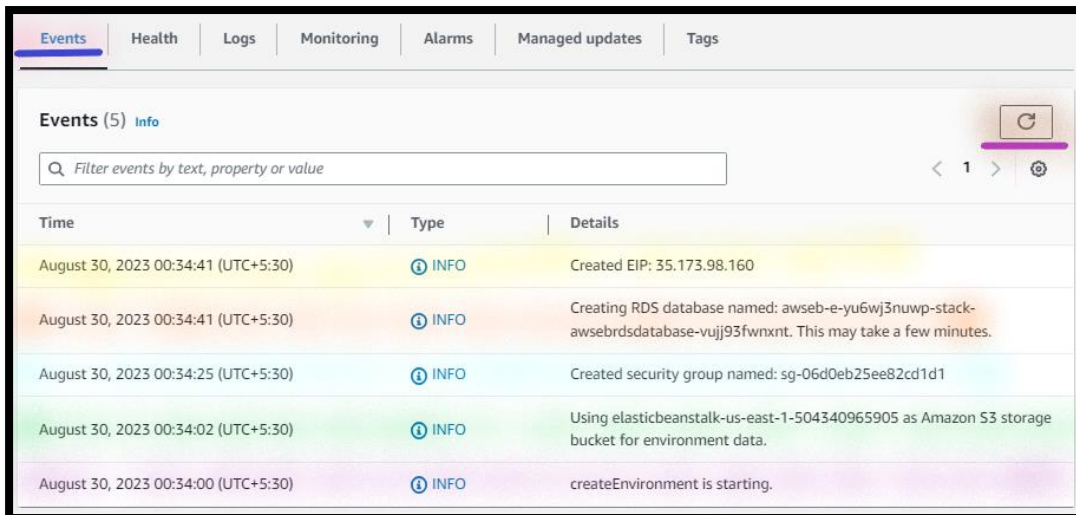
**Note:** **Review** the **details**.

i. Select **Submit**.

**Note:** You can see the "**Elastic Beanstalk is launching your environment**" message.

**Note:** During the **environment creation process**, you can see the **events**.

**Note:** You can **Refresh** to see the **events**.

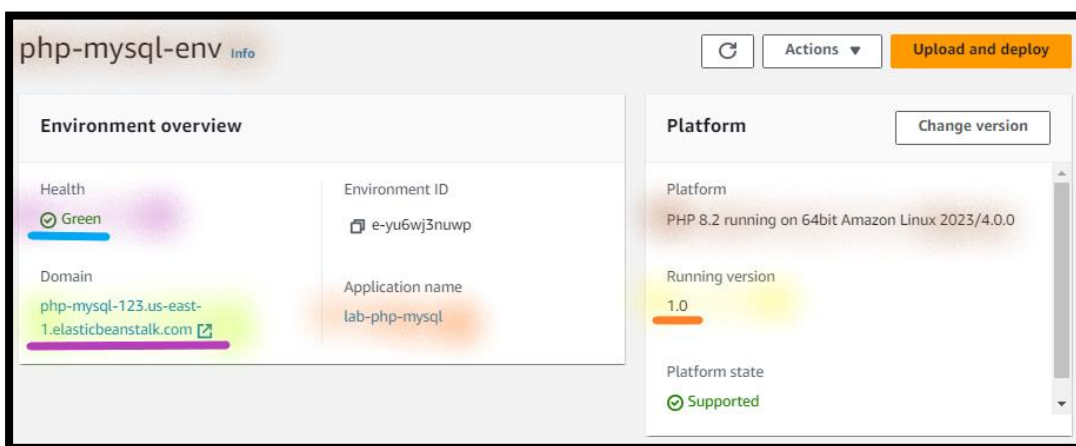


The screenshot shows the 'Events' tab in the AWS CloudFormation console. It displays a list of events for a stack named 'php-mysql-env'. The events are filtered by 'INFO' type and show the progress of creating an EIP, RDS database, security group, and S3 bucket, as well as the start of the 'createEnvironment' process.

Time	Type	Details
August 30, 2023 00:34:41 (UTC+5:30)	INFO	Created EIP: 35.173.98.160
August 30, 2023 00:34:41 (UTC+5:30)	INFO	Creating RDS database named: awseb-e-yu6wj3nuwp-stack-awsebrdsdatabase-vujj93fwnxnt. This may take a few minutes.
August 30, 2023 00:34:25 (UTC+5:30)	INFO	Created security group named: sg-06d0eb25ee82cd1d1
August 30, 2023 00:34:02 (UTC+5:30)	INFO	Using elasticbeanstalk-us-east-1-504340965905 as Amazon S3 storage bucket for environment data.
August 30, 2023 00:34:00 (UTC+5:30)	INFO	createEnvironment is starting.

**Note:** Wait (~15 mnts.) till **deployment** gets **completed** and **Health** status as **Green**.

a) **Copy** the **Domain** name in the **Notepad**.



The screenshot shows the 'Environment overview' page for 'php-mysql-env' in the AWS Elastic Beanstalk console. The 'Health' status is 'Green'. The 'Domain' is 'php-mysql-123.us-east-1.elasticbeanstalk.com'. The 'Platform' is 'PHP 8.2 running on 64bit Amazon Linux 2023/4.0.0' with a 'Running version' of '1.0'. The 'Platform state' is 'Supported'.

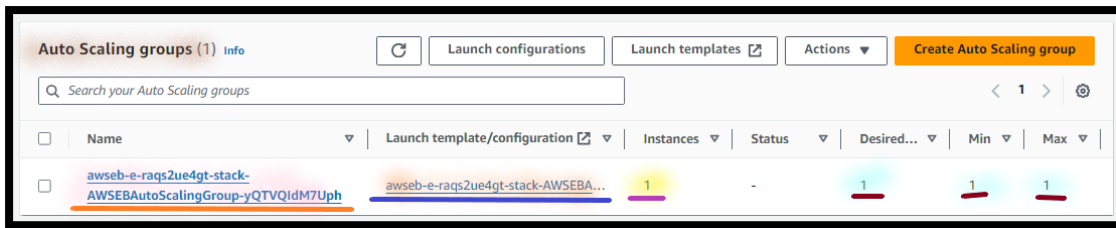
## Step 4: Review the Created Resources

### View the Auto Scaling

9. In the **AWS Management Console**, on the **Services** menu, search and select **EC2**.
10. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
  - a. Select **Auto Scaling Groups**.



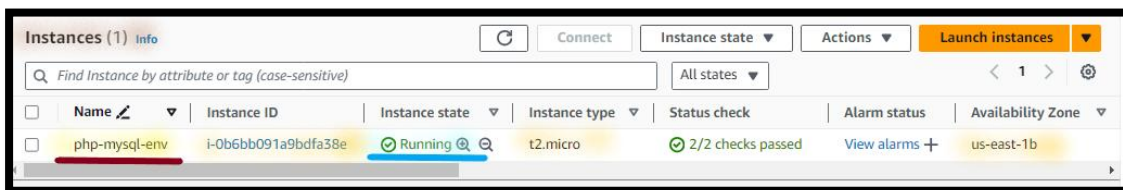
**Note:** You can see the **Auto Scaling Group** with **1 Instance**.



## View the Instance

11. From the **EC2** console.
  - a. Select **Instances**.

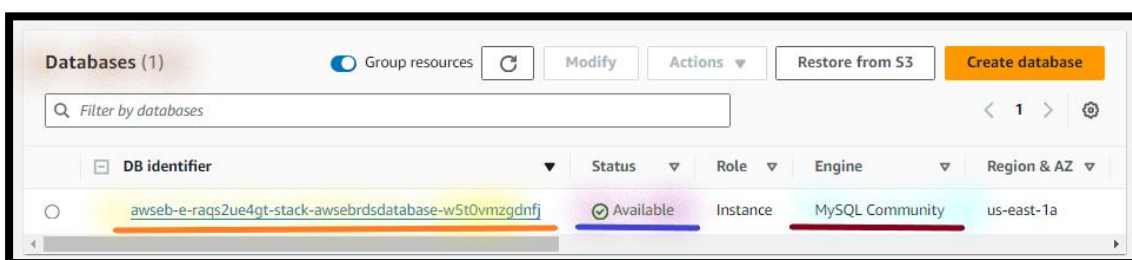
**Note:** You can see the **php-mysql-env** instance.



## View the Database

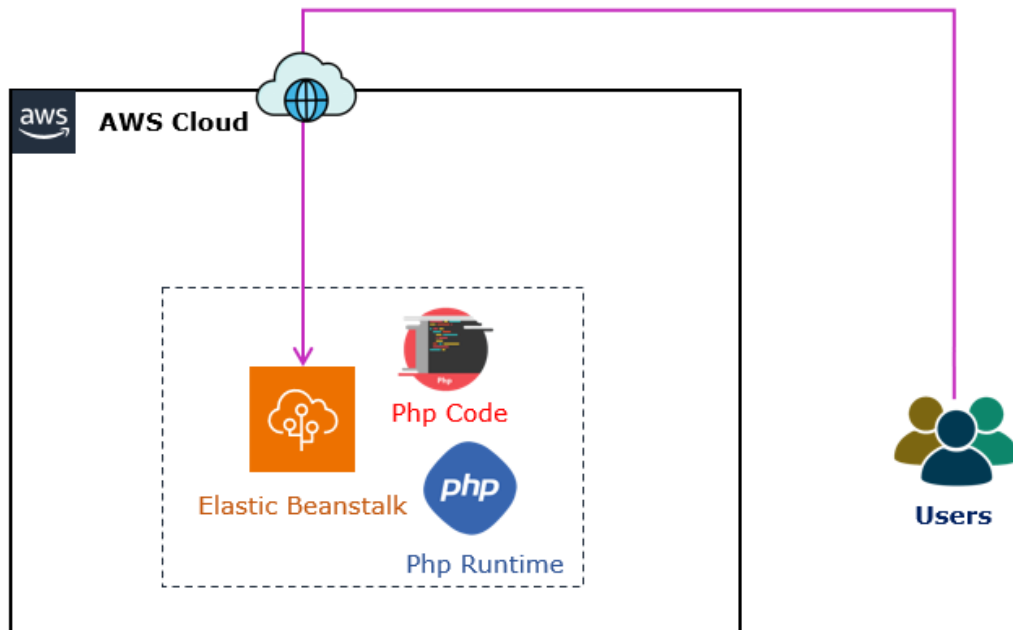
12. In the **AWS Management Console**, on the **Services** menu, search and select **RDS**.
13. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
  - a. Select **Databases**

**Note:** You can see the **MySQL** database.



## Task 3: Access Application

In this task, you will access the web application.

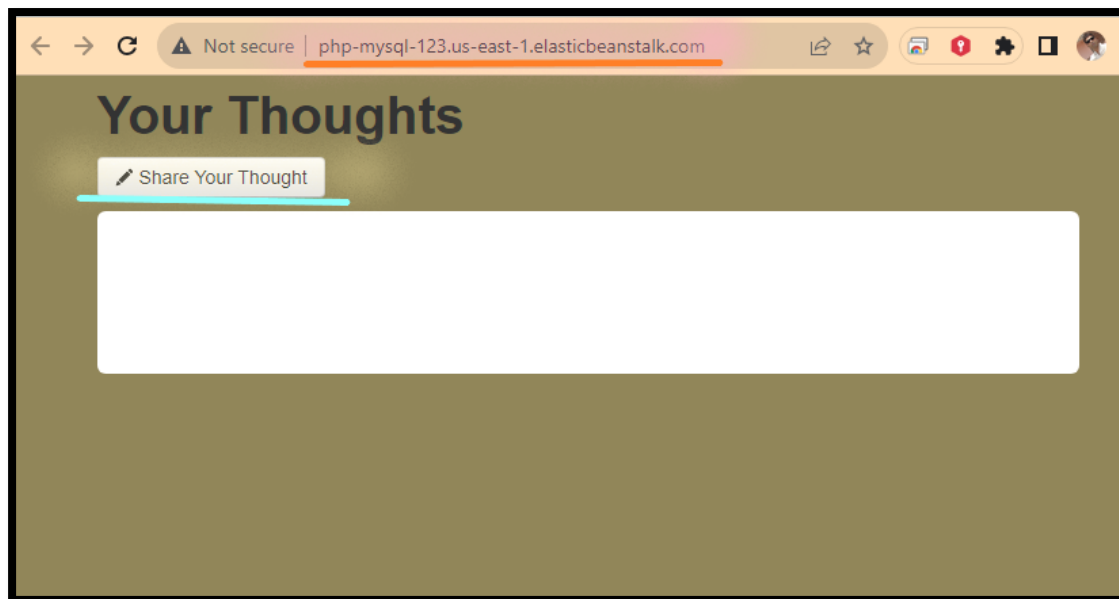


### Step 1: Access the Application

14. **From** your **Local Desktop/ Laptop** (*Windows desktop*) open the **Browser**, write **Domain name** of the **Elastic Beanstalk**, to access the **website**.

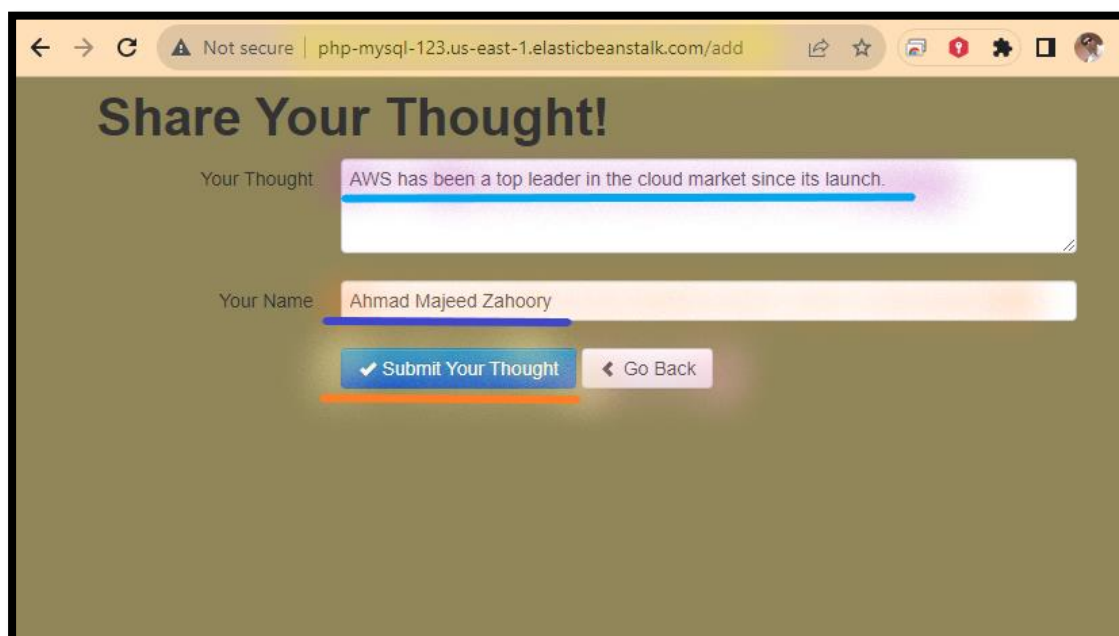
**Note:** You can see the **Php Application** web page.

- a. Click on **Share Your Thought**.



A screenshot of a web browser window. The address bar shows 'Not secure | php-mysql-123.us-east-1.elasticbeanstalk.com'. The page has a dark olive green background. At the top, the title 'Your Thoughts' is displayed in a large, bold, white font. Below the title, there is a small white button with a pencil icon and the text 'Share Your Thought'. Underneath this button is a large, empty white rectangular text input area.

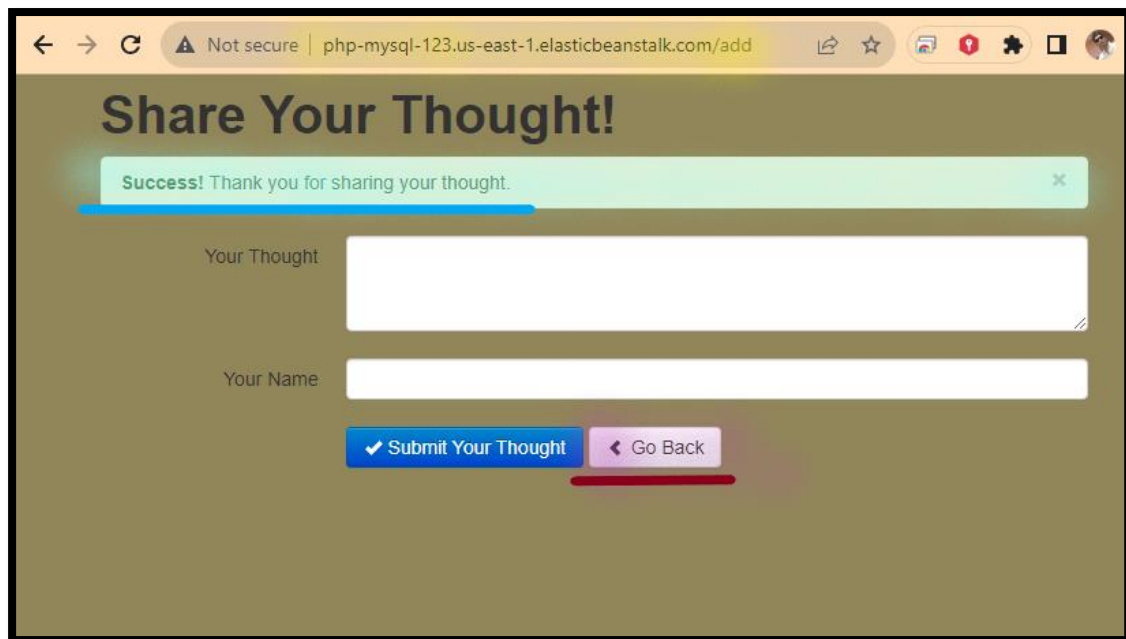
- i. Write **your Thought**.
- ii. Write **your Name**.
  - a) Select **Submit your thought**.



A screenshot of a web browser window showing the 'Share Your Thought!' form. The address bar shows 'Not secure | php-mysql-123.us-east-1.elasticbeanstalk.com/add'. The page has a dark olive green background. The title 'Share Your Thought!' is displayed in a large, bold, white font. Below the title, there are two input fields. The first field is labeled 'Your Thought' and contains the text 'AWS has been a top leader in the cloud market since its launch.' The second field is labeled 'Your Name' and contains the text 'Ahmad Majeed Zahoory'. Below the input fields, there are two buttons: a blue button with a checkmark icon and the text 'Submit Your Thought', and a white button with a left arrow icon and the text 'Go Back'.

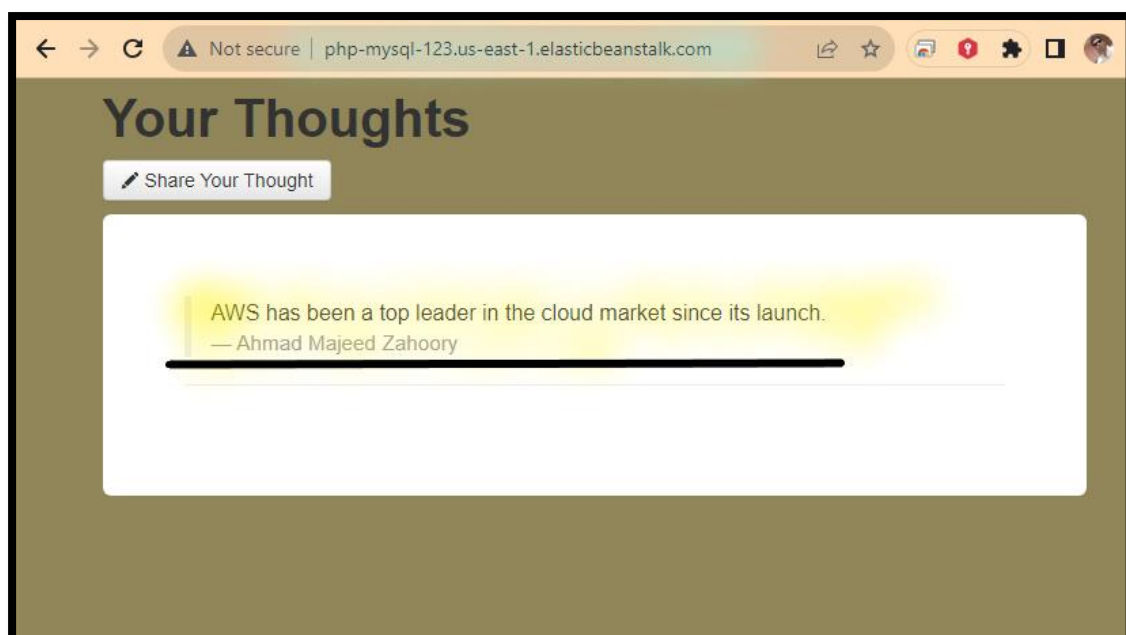
**Note:** You can see the **Success** message.

- b) Select **Go back**.



A screenshot of a web browser showing a form titled "Share Your Thought!". The browser's address bar displays "Not secure | php-mysql-123.us-east-1.elasticbeanstalk.com/add". A green success message at the top reads "Success! Thank you for sharing your thought." with a close button. Below this, there are two input fields: "Your Thought" and "Your Name". At the bottom of the form are two buttons: a blue "Submit Your Thought" button with a checkmark icon, and a purple "Go Back" button with a left arrow icon.

**Note:** You can see the **Submitted** thoughts.



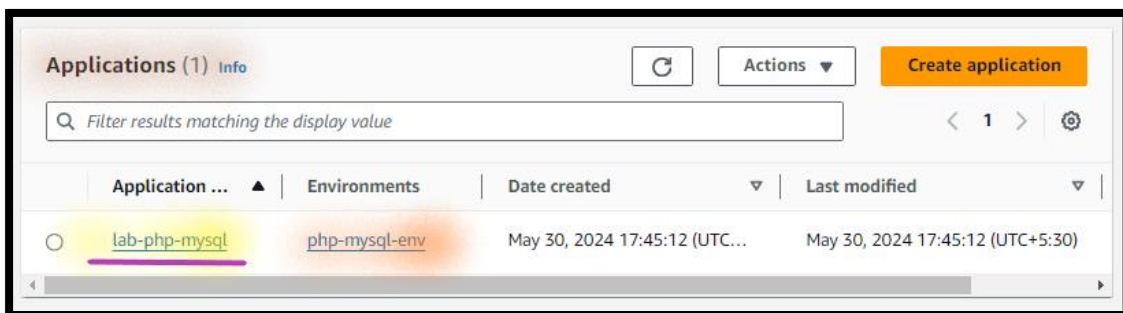
A screenshot of a web browser showing a page titled "Your Thoughts". The browser's address bar displays "Not secure | php-mysql-123.us-east-1.elasticbeanstalk.com". At the top left, there is a button labeled "Share Your Thought" with a pencil icon. The main content area features a white box containing a submitted thought: "AWS has been a top leader in the cloud market since its launch." followed by the attribution "— Ahmad Majeed Zahoory".

## Task 4: Deploy the Updated Code

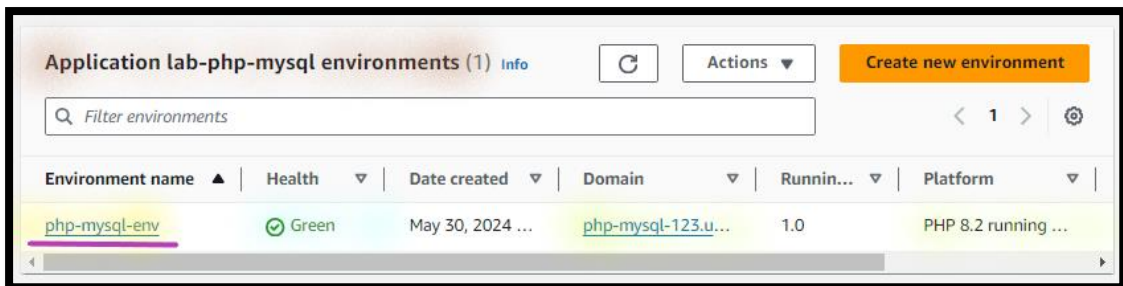
In this task, you will update the code deployed using cloud beanstalk.

### Step 1: Upload the Code v2.0

15. In the **AWS Management Console**, on the **Services** menu, search and select **Elastic Beanstalk**.
16. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
17. Open **lab-php-mysql**.

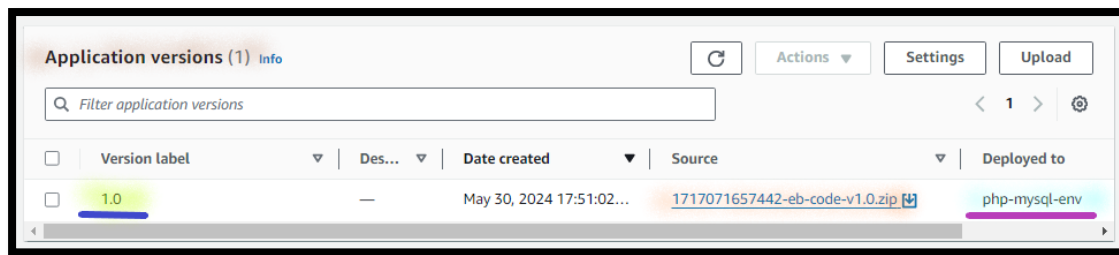


**Note:** You can see the **Application environment**.

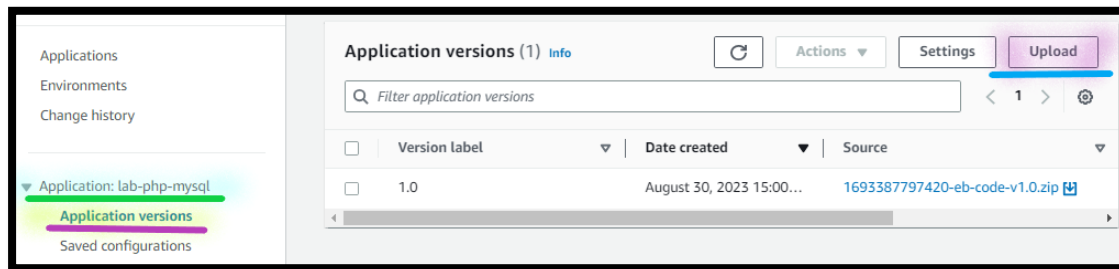


- a. Select **Application: lab-php-mysql**.
  - i. Select **Application versions**.

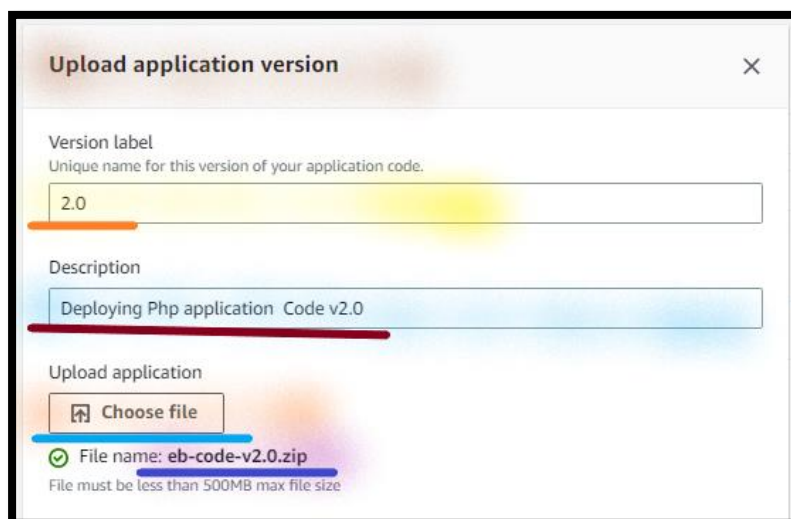
**Note:** You can see the **Application version 1.0**.



a) Select **Upload**.

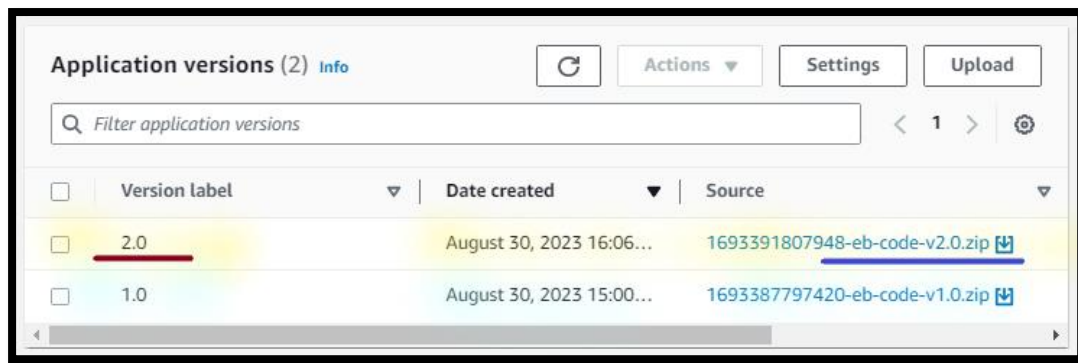


- 1) **Version label:** Write **2.0**.
- 2) **Description:** Write **Deploying Php application Code v2.0**.
- 3) **Choose file:** **Navigate** and select **eb-code-v2.0 zip**.



b) Select **Upload**.

**Note:** You can see the **2.0** version under **Application versions**.



## Step 2: Deploy the Code v2.0

18. From the **Elastic Beanstalk** console.

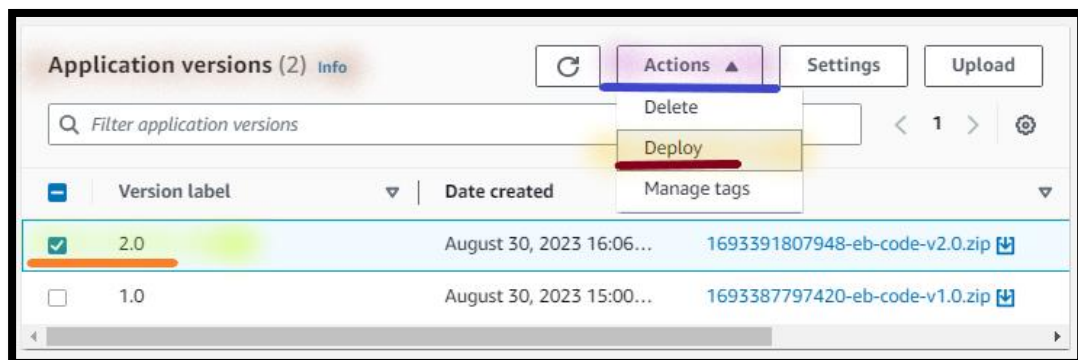
19. Select **Application: lab-php-mysql**.

a. Select **Application versions**.

i. Select **2.0**.

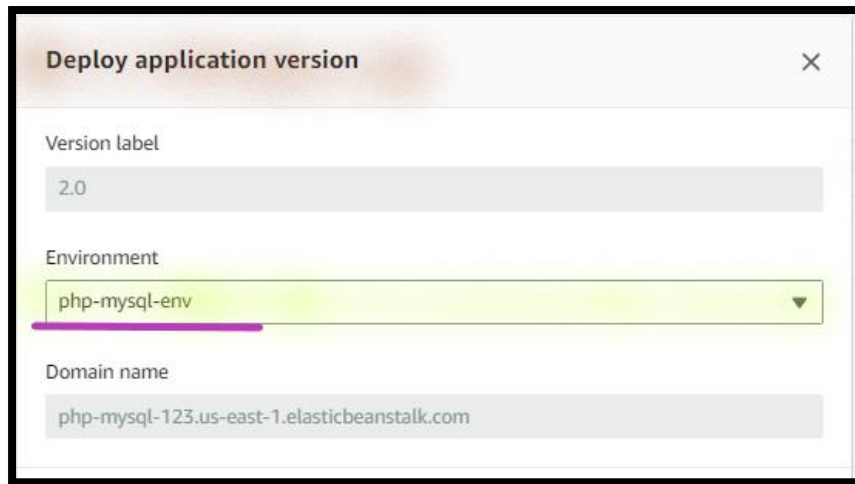
a) Select **Actions**.

1) Select **Deploy**.



2) From the **Deploy application version** page:

I. **Environment:** Dropdown and select **php-mysql-env**.



The screenshot shows a 'Deploy application version' dialog box. It has three input fields: 'Version label' with the value '2.0', 'Environment' with a dropdown menu showing 'php-mysql-env', and 'Domain name' with the value 'php-mysql-123.us-east-1.elasticbeanstalk.com'. The dialog box has a close button (X) in the top right corner.

II. Select **Deploy**.

**Note:** You can see the "**The deployment to php-mysql-env started successfully**" message.

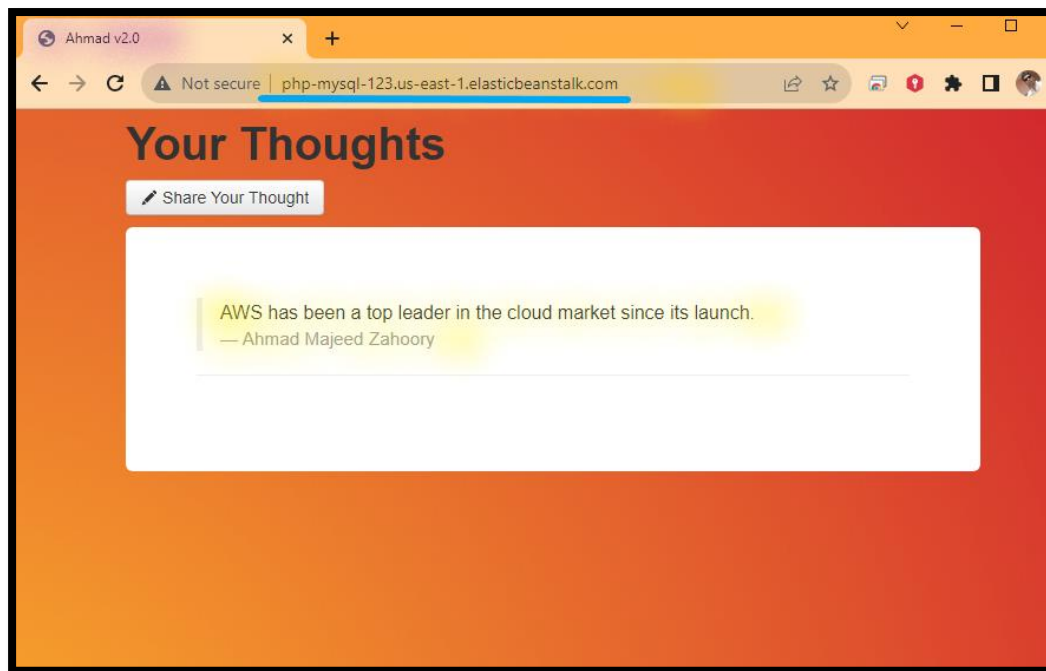
### Step 3: Access the Application

20. **From** your **Local Desktop/ Laptop**, (*Windows desktop*) open the **Browser**, write **Domain name** of the **Elastic Beanstalk**, to access the **website**.

**Note:** You can see the **Updated Php Application** web page.

**Note:** If **not** able to **see** the **new web page**, Press **Ctrl+F5** (multiple times) to **clear** the **cache** to see the new web page.

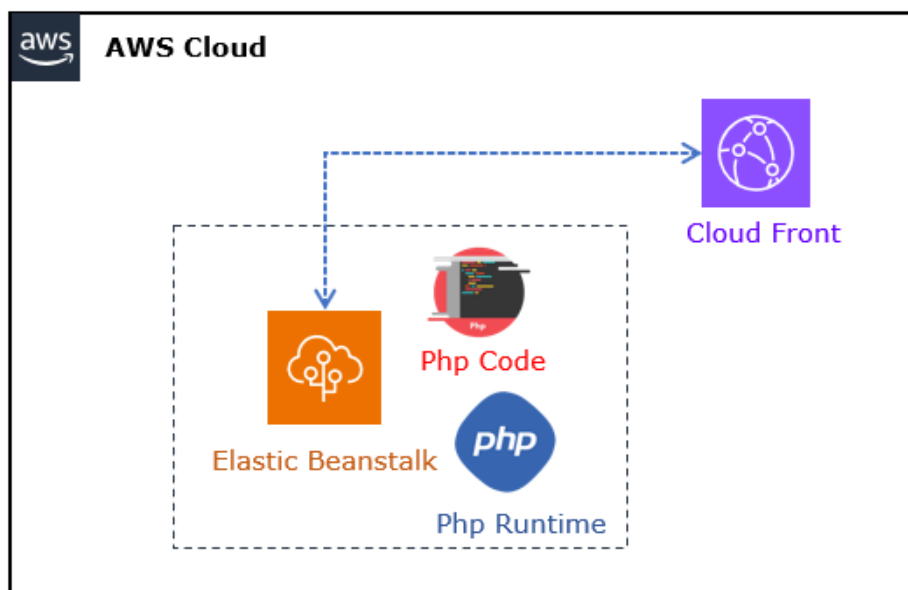




**Note:** You can **add additional thoughts** also.

## Task 5: Create CDN

In this task, you would integrate the web application via CDN.



## Step 1: Create Cloud Front Distribution

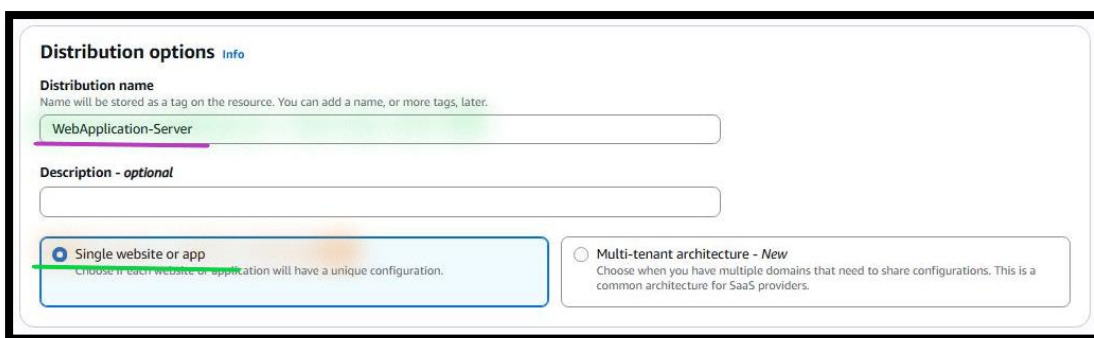
21. In the **AWS Management Console**, on the **Services** menu, search and select **CloudFront**.

22. Select **Create a CloudFront distribution**.

a. In the **Get Started** page:

i. **Distribution Name:** Write **Elastic Beanstalk Server-YOUR-ID**.

ii. Select **Single website or app**.



**Distribution options** Info

**Distribution name**  
Name will be stored as a tag on the resource. You can add a name, or more tags, later.

WebApplication-Server

**Description - optional**

☒ **Single website or app**  
Choose if each website or application will have a unique configuration.

☐ **Multi-tenant architecture - New**  
Choose when you have multiple domains that need to share configurations. This is a common architecture for SaaS providers.

a) Select **Next**.

b. In the **Specify origin** page:

i. **Origin type:** Select **Other**.

ii. **Custom domain:** Copy **Domain name** of the **Elastic Beanstalk** (without **http://**).

**Info:** An origin is the location where you store the original version of your content. When CloudFront gets a request for your files, it goes to the origin to get the files that it distributes at edge locations.

**Origin type**  
Your origin is where your content (such as a website or app) lives. CloudFront works with AWS-based origins and origins hosted on other cloud providers.

- ☐ **Amazon S3**  
Deliver static assets like files and images, statically generated websites or single page applications (SPA).
- ☐ **Elastic Load Balancer**  
Deliver applications hosted behind ELB such as dynamic websites, web services, and APIs.
- ☐ **API Gateway**  
Deliver API endpoints for REST APIs hosted on API Gateway.
- ☐ **Elemental MediaPackage**  
Deliver end-to-end live events or video on demand (VOD).
- ☐ **VPC origin**  
Deliver applications and content hosted within private VPCs, such as EC2 instances and Application Load Balancers.
- ☒ **Other**  
Refer to any AWS or non-AWS origin through its publicly resolvable URL.

**Origin**  
**Custom origin**  
Choose an AWS origin, or enter your origin's domain name. [Learn more](#)

ec2-44-204-255-105.compute-1.amazonaws.com

**Origin path - optional**  
The directory path within your origin where your content is stored. [Learn more](#)

/path

iii. **Settings:** Select **Customize origin settings**.

a) **Protocol:** Select the **HTTP Only**

**Settings** [Info](#)  
CloudFront provides default origin and cache settings based on what origin you selected. [View default settings for Custom origin](#)

**Origin settings**  
Origin settings control how CloudFront connects to the specified origin.

- ☐ Use recommended origin settings
- ☒ **Customize origin settings**

**Add custom header - optional**  
CloudFront includes this header in all requests that it sends to your origin.

[Add header](#)

**Enable Origin Shield**  
Origin shield is an additional caching layer that can help reduce the load on your origin and help protect its availability.

- ☒ No
- ☐ Yes

**Protocol** [Info](#)

- ☒ **HTTP only**
- ☐ HTTPS only
- ☐ Match viewer

**HTTP port**  
Enter your origin's HTTP port. The default is port 80.

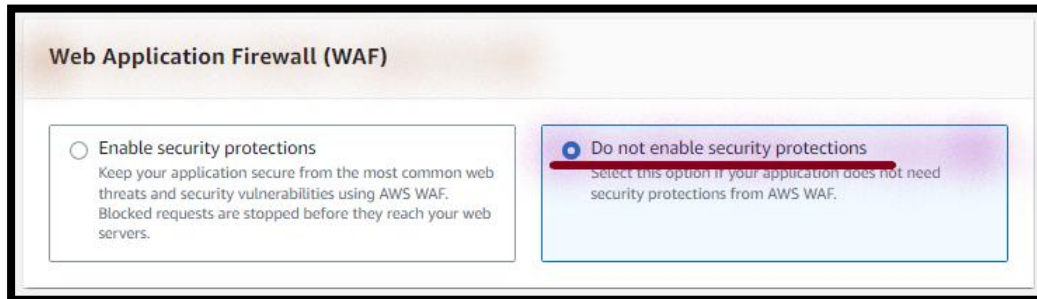
80

**Note:** Leave the other options as default.

b) Select **Next**.

iv. In the **Enable security** page:

- a) **Web Application Firewall (WAF)**: Select **Do not enable security protections**.



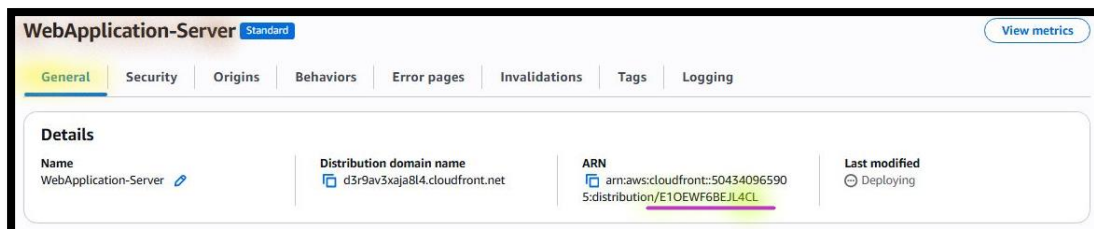
- b) Select **Next**.

v. In the **review and Create** page:

- a) Select the **Create Distribution**.

**Note:** **Wait**, till you can see the **message "Successfully created new distribution"**.

- b) **Copy** the **Distribution ID** in the **Notepad**.



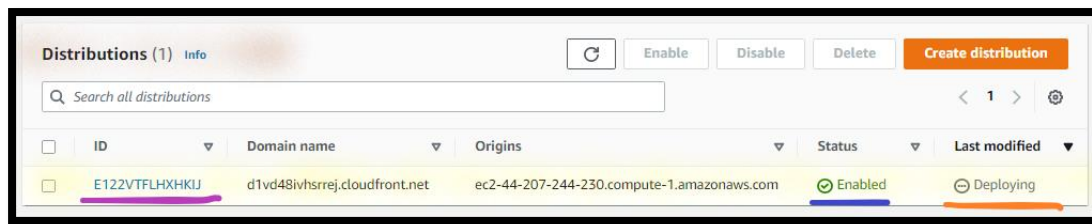
## Step 2: Verify the CloudFront Distribution Status

23. **From** the **CloudFront** console.

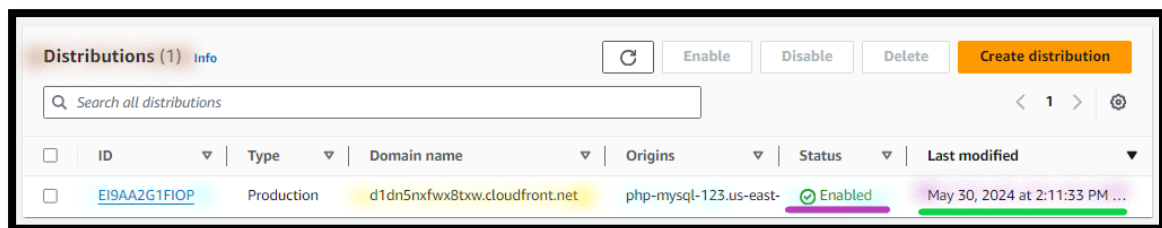
24. Select the **Distributions** (**identify via Distribution Id**).

**Note:** You can see the distribution **Status** as **Enabled**.

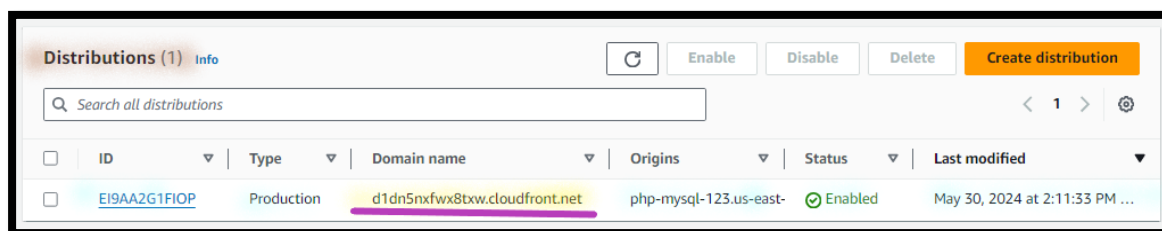
**Note:** You can see the distribution **Last modified** status as **Deploying**.



**Note:** **Wait**, till you can see the **Last modified** status as **Deployed day/time**. Keep **Refresh** unless last modified status.

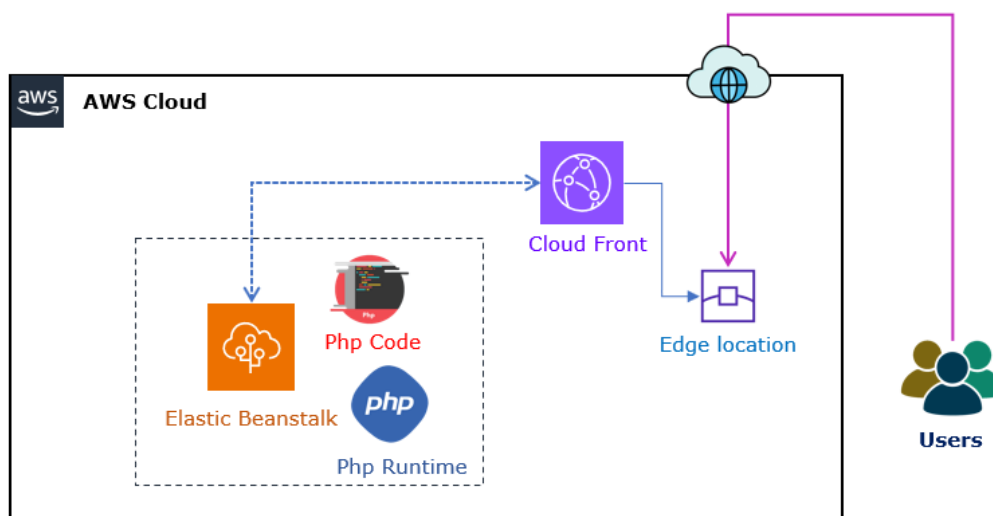


a. **Copy** the **Domain name** in the **Notepad**.



## Task 6: Access Web Application

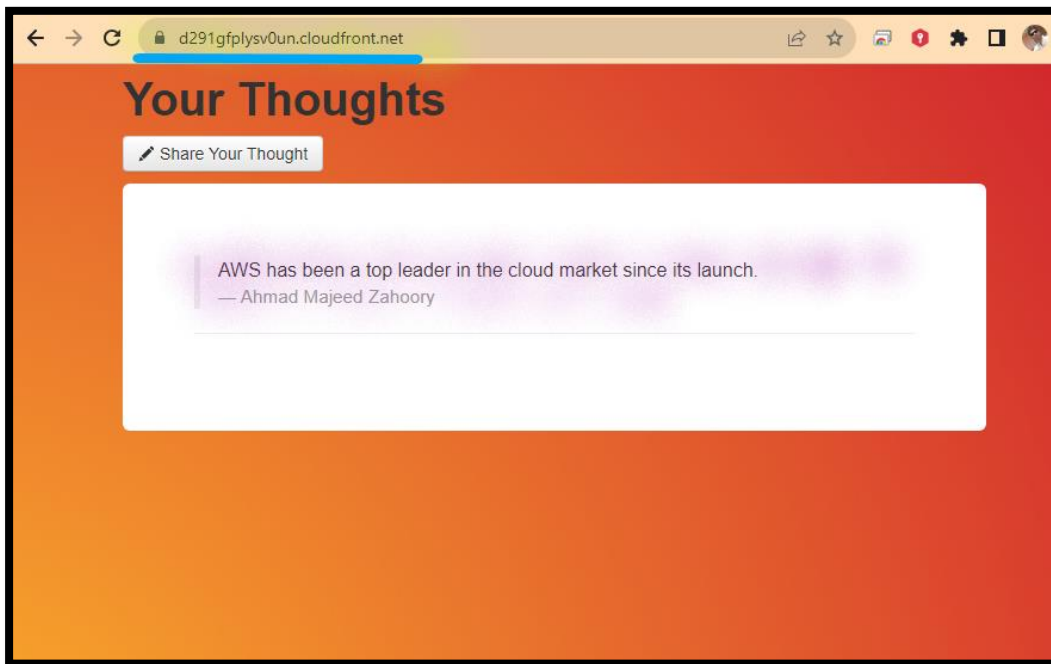
In this task, you would access web application via cdn (edge locations).



## Step 1: Access Application using CDN

25. **From** your **Local Desktop/ Laptop**, (*Windows desktop*) open the **Browser**, write **Domain name** of the **CDN**, to access the **website**.

**Note:** You can see the **Php Application** web page.

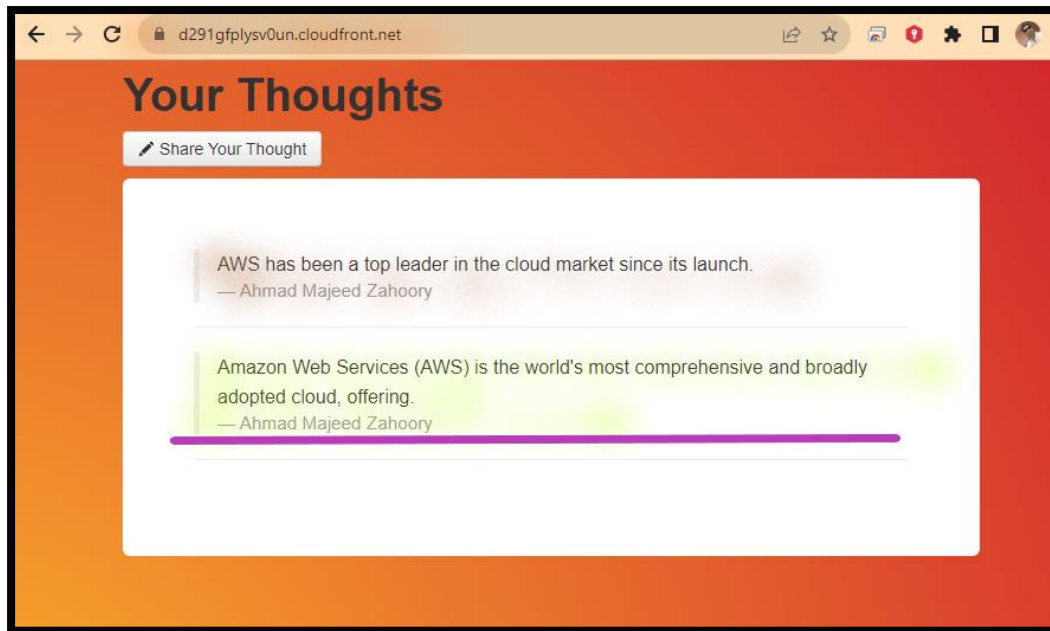


- a. Click on **Share Your Thought**.
  - i. Write **your Thought**.
  - ii. Write **your Name**.
    - a) Select **Submit your thought**.

**Note:** You can see the **Success** message.

- b) Select **Go back**.

**Note:** You can see the **Submitted** thoughts.



## Task 7: Delete Environment

### Step 1: Delete the CloudFront Distribution

26. In the **AWS Management Console**, on the **Services** menu, search and select **CloudFront**.

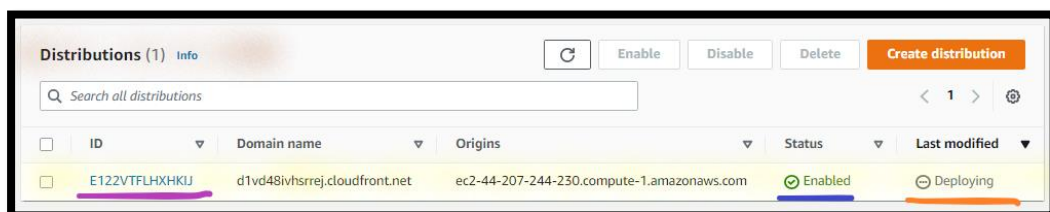
27. Select the **Distributions**.

a. Select your **Cloud Front Distribution** (*identify via **Distribution Id***).

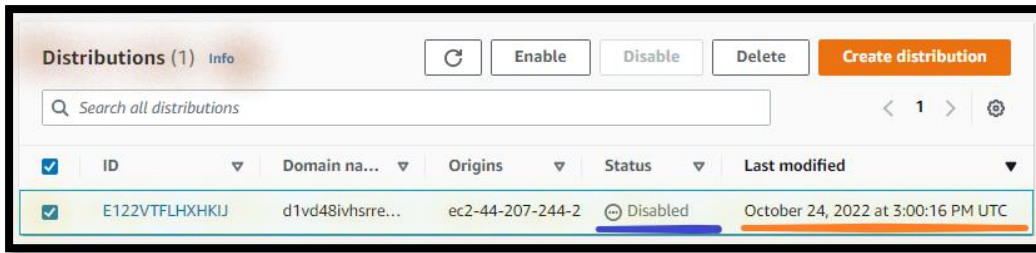
i. Select **Disable**.

a) Select **Disable**.

**Note:** You can see the distribution **Status** as **Enabled** and **Last modified** status as **Deploying**.



**Note:** **Wait** (~5 mnts.), till you can see the **Status** as **Disabled** and **Last modified** status as **Deployed day/time**.



- b. Select your **Cloud Front Distribution** (*identify via **Distribution Id***).
  - i. Select **Delete**.
    - a) Select **Delete**.

## Step 2: Delete the Elastic Beanstalk

28. In the **AWS Management Console**, on the **Services** menu, search and select **Elastic Beanstalk**.
29. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
30. Select **Application**
  - a. Select **lab-php-mysql**.
    - i. Select **Actions**.
      - a) Select **Delete application**.
        - 1) When you **get prompt**, write **lab-php-mysql**.
        - 2) Select **Delete**.

**Note:** **Wait** (~15 mnts), till **application** gets **deleted**.



### Step 3: Delete CloudFormation Stack

31. In the **AWS Management Console**, on the **Services** menu, search and select **CloudFormation**.
32. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
33. Select the **Stack**.
  - a. Select **LAB-EB** stack.
    - i. Select **Delete**.
      - a) Select **Delete**.

### Step 4: Delete the S3 Bucket

34. In the **AWS Management Console**, on the **Services** menu, search and select **S3**.
35. Choose the **YOUR ALLOCATED REGION** list to the right of your account information on the navigation bar.
36. Select **Buckets**.
  - a. Select **cf-template....** bucket.
    - i. Select **Empty**.
      - a) Type **permanently delete** to *Delete all the objects*.
      - b) Select **Empty**.
      - c) Select **Exit**.
  - b. Select **cf-template.... bucket**.
    - i. Select **Delete**.
      - a) Type **Bucket name**, to *Delete the bucket*.
      - b) Select **Delete bucket**.