

Assignment: Deploy PHP App Using Elastic Beanstalk

NAME: VIKRAM

Problem Statement

You work for XYZ Corporation. The company wants to launch a new **web-based application** that should **not have servers running all the time** and should be **fully managed by AWS**.

You are required to **implement a suitable managed solution**.

Tasks To Be Performed

1. Create an **Elastic Beanstalk environment** with the runtime as **PHP**.
 2. **Upload a simple PHP file** to the environment once created.
-

Solution: Using AWS Elastic Beanstalk

Overview

AWS Elastic Beanstalk is a fully managed service that automatically handles environment provisioning, load balancing, scaling, and application monitoring.

You only need to provide your application code — AWS takes care of the infrastructure and scaling automatically.

Steps to Perform

Step 1 — Open Elastic Beanstalk

- Go to the **AWS Management Console**
 - Search for **Elastic Beanstalk**
 - Click **Create Environment**
-

Step 2 — Choose Environment Type

- Select **Web server environment**
 - Click **Select**
-

Step 3 — Configure Environment

Setting	Value
Application name	demo-php
Environment name	demo-php-env
Platform	PHP
Platform branch	Latest available (e.g., PHP 8.3)
Platform version	Default

Step 4 — Upload Application Code

1. Create a file named **index.php**.
2. Open your text editor (like Notepad on Windows)
3. Copy and paste the following code:

```
<?php  
echo "Hello from XYZ Corporation!";  
?>
```

4. **Save the file:**
 - Go to **File > Save As.**
 - In the "File name" field, type index.php
 - In the "Save as type" field, choose **All Files.**
 - Click **Save.**
 5. Zip the file (make sure index.php is directly inside the zip, not within a folder).
Example file name: index.php.zip
 6. In Elastic Beanstalk:
 - Under **Application code**, select **Upload your code**
 - **Choose your php-app.zip**
 - Click **Next**
-

Step 5 — Configure Service Access

After clicking **Next**, Elastic Beanstalk will ask for **Service Access configuration**.

This allows Beanstalk to launch and manage AWS resources securely.

Configuration:

- **Service role:**
 - Choose “**Create and use new service role**”
 - (This will create a role named aws-elasticbeanstalk-service-role automatically.)

- **EC2 instance profile:**

Choose “Create and use new instance profile”

- (This will create a role named aws-elasticbeanstalk-ec2-role.)

These roles allow Beanstalk to launch EC2 instances, access S3, and send metrics to CloudWatch.

- After verifying these options, click **Next** to proceed.

Step 6 — Set up networking

- Select VPC and subnet.
- Enable Public IP Address.
- Keep all the Default settings
- Click Next

Step 7 — Configure instance traffic and scaling

- Select the EC2 security group
- And keep all the settings default
- Review and Create Environment.

The screenshot shows the AWS Elastic Beanstalk 'Create environment' wizard at Step 7: Configure environment. The 'Configure environment' tab is selected. On the left, a sidebar lists optional steps: Step 1 (selected), Step 2, Step 3 - optional, Step 4 - optional, Step 5 - optional, and Step 6. The main area shows the 'Configure environment' section with two tabs: 'Environment tier' (selected) and 'Application information'. Under 'Environment tier', it says 'Amazon Elastic Beanstalk has two types of environment tiers to support different types of web applications.' and shows two options: 'Web server environment' (selected) and 'Worker environment'. Under 'Application information', it says 'Application name' and shows the value 'demo-php' in a text input field with a note 'Maximum length of 100 characters.' The top navigation bar includes the AWS logo, search bar, and account information.

Elastic Beanstalk > Create environment

Environment information Info

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

Environment name
Demo-php-env

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
Leave blank for autogenerated value .us-east-1.elasticbeanstalk.com Check availability

► Environment description

Platform Info

Platform	Platform branch	Platform version
PHP	PHP 8.4 running on 64bit Amazon Linux 2023	4.7.6 (Recommended)

Elastic Beanstalk > Create environment

PHP	PHP 8.4 running on 64bit Amazon Linux 2023	4.7.6 (Recommended)
-----	--	---------------------

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.
index.php

Source code origin. Maximum size 500 MB
 Local file
 Public S3 URL

Upload application
Choose file
 File name: index.php.zip
File must be less than 500MB max file size

Elastic Beanstalk > Create environment

Step 1 Configure environment

Step 2 **Configure service access**

Step 3 - optional Set up networking, database, and tags

Step 4 - optional Configure instance traffic and scaling

Step 5 - optional Configure updates, monitoring, and logging

Step 6 Review

Configure service access Info

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

EC2 instance profile
Choose an IAM instance profile with managed policies that allow your EC2 instances to perform required operations.
aws-elasticbeanstalk-ec2-role Create role

EC2 key pair - optional
Select an EC2 key pair to securely log in to your EC2 instances. [Learn more](#)
Choose a key pair Create key pair

Cancel Skip to review Previous Next

aws Search [Alt+S] United States (N. Virginia) Account ID: 0622-5006-2838 root

Elastic Beanstalk > Create environment

Set up networking, database, and tags

- Configure service access
- Step 3 - optional
- Configure instance traffic and scaling
- Step 4 - optional
- Configure updates, monitoring, and logging
- Step 5 - optional
- Step 6 Review

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](#)

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-03af9fa3d1eb0c8bf | (10.0.0.0/16) | default vpc

Public IP address

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

Enable

Instance subnets

Availability Zone	Subnet	CIDR	Name
us-east-1a	subnet-057506d411de73650	10.0.16.0/20	subnet1
us-east-1b	subnet-0c0f78808cbf67247	10.0.0.0/20	default subnet

Create environment

Instance metadata service (IMDS)

Your environment's platform supports both IMDSv1 and IMDSv2. To enforce IMDSv2, deactivate IMDSv1. [Learn more](#)

IMDSv1

With the current setting, the environment enables only IMDSv2.

Disable

EC2 security groups

Select security groups to control traffic.

EC2 security groups

Choose security groups

sg-0fc6d5905a59392c4 | default default VPC security group

Capacity

Configure the compute capacity of your environment and auto scaling settings to optimize the number of instances used.

Auto scaling group

Environments > Demo-php-env

Environment successfully launched.

Demo-php-env

Actions

Environment overview

Health	Environment ID e-njb3dq6rap
Domain Demo-php-env.eba-yjyyxdui.us-east-1.elasticbeanstalk.com	Application name demo-php

Platform

Platform PHP 8.4 running on 64bit Amazon Linux 2023/4.7.6	Running version index.php	Platform state
---	---------------------------	----------------

Events **Health** **Monitoring** **Managed updates**

Events (12)

Filter events by text, property or value

Time	Type	Details
October 27, 2025 10:51:21 (UTC+5:20)		Environment health has transitioned from Pending to Ok. Initialization completed 52 seconds

Step 8—Environment Creation

- AWS will automatically:
 - Launch an **EC2 instance**
 - Create an **Auto Scaling Group**
 - Set up a **Load Balancer**
 - Configure **CloudWatch monitoring**

Wait around **5–10 minutes** for deployment to complete.

Once done, you'll see "**Health: Green**" on the dashboard.

The screenshot shows the AWS CloudFormation Environment Health page for 'Demo-php-env'. A green banner at the top indicates 'Environment successfully launched.' Below this, the 'Health' tab is selected, showing the 'Overall health' section with various metrics like Requests / second, 2XX responses, 3XX responses, 4XX responses, 5xx responses, P99 latency(ms), P90 latency(ms), P75 latency(ms), P50 latency(ms), and P10 latency(ms). The 'Enhanced instance health' section shows one instance (i-0dd640868e...) with a status of 'Ok' and a running time of 6 minutes. The overall health is marked as 'Green'.

The screenshot shows the AWS EC2 Instances page. The left sidebar is expanded to show 'Instances' under 'EC2'. The main table displays one instance: 'Demo-php-env' (Instance ID: i-0dd640868e5384891), which is currently 'Running'. Other columns include Instance state (t3.micro), Status check (Initializing), Alarm status (View alarms +), Availability Zone (us-east-1b), and Public IPv4 (ec2-34-225). A search bar at the top allows finding instances by attribute or tag.

Auto Scaling groups

Last updated less than a minute ago

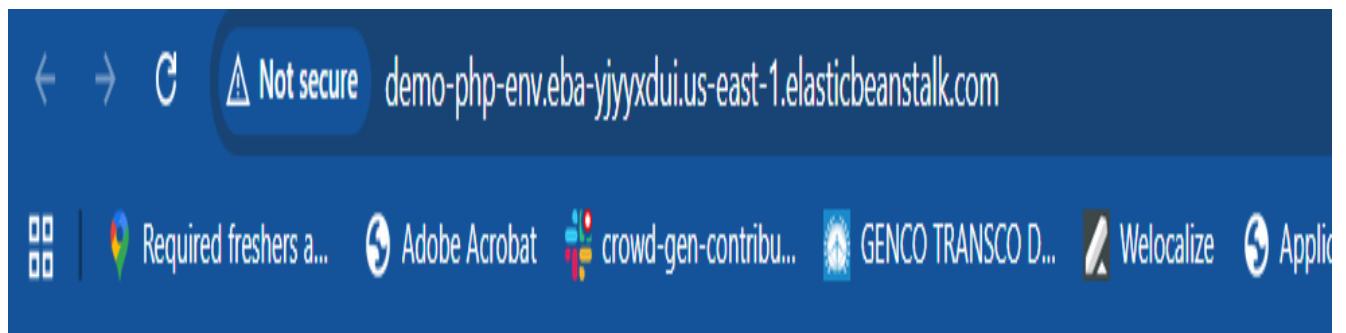
Launch configurations Launch templates Actions Create Auto Scaling group

Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max
awseb-e-njb3dq6rap-stack-AWSEBAutoScalingGroup-3rUb1htALpdY	AWSEBEC2LaunchTemplate_14s3737Plw	1	-	1	1	1

Step 9 — Verify Deployment

- Click the **environment URL** (e.g. <http://demo-php-env.us-east-1.elasticbeanstalk.com>)
- The browser should display:

Hello from XYZ Corporation!



Hello from XYZ Corporation!