

INFOTRIXS FINAL PROJECT

Project Statement: Scalable Web Application

Description: Develop a scalable web application using AWS Elastic Beanstalk, EC2, and RDS. The application should handle high traffic and dynamically scale resources as needed. **Implementation:** Use AWS Elastic Beanstalk to deploy and manage the web application. Utilize EC2 instances and RDS for hosting the application and database. Implement load balancing and auto-scaling configurations.

Scalable-Web-Application

1. Created VPC with public subnet and private subnet

Your VPCs (1)

Info

Q Search

<1>

VPC ID

State

IPv4 CIDR

IPv6 CIDR

vpc-0b45219c7b2b42330

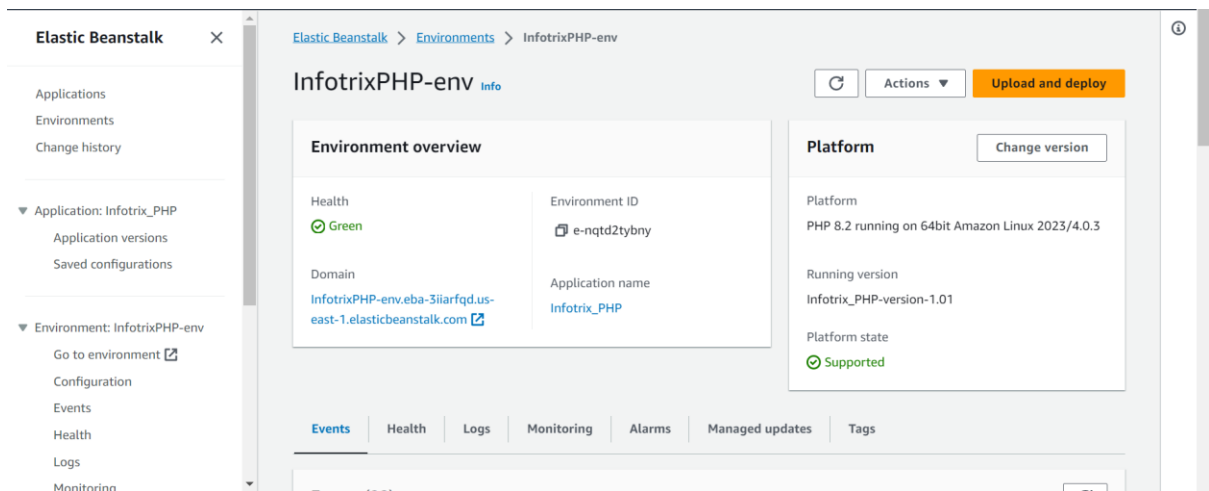
Available

172.31.0.0/16

-


2.Created Elastic Beanstalk (EBS)

- Created Application
- Created Environment



Local file

Upload application

 Choose file

File must be less than 500MB max file size

☐ Public S3 URL

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



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 checked="" type="checkbox"/>	us-east-1d	subnet-08ab6c538...	172.31.32.0/20	
<input checked="" type="checkbox"/>	us-east-1a	subnet-0983a3c7b...	172.31.0.0/20	
<input checked="" type="checkbox"/>	us-east-1f	subnet-0b7c9e5fe...	172.31.64.0/20	
<input type="checkbox"/>	us-east-1e	subnet-0bcee861d...	172.31.48.0/20	
<input type="checkbox"/>	us-east-1c	subnet-0d6bcef8d...	172.31.16.0/20	
<input type="checkbox"/>	us-east-1b	subnet-0d9a421d4...	172.31.80.0/20	

Database settings

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

Engine

mysql

Engine version

8.0.33

Instance class

db.t2.micro

Storage

Choose a number between 5 GB and 1024 GB.

5

GB

Username

intel

Password

Auto scaling group

Environment type

Select a single-instance or load-balanced environment. You can develop and test an application in a single-instance environment to save costs and then upgrade to a load-balanced environment when the application is ready for production. [Learn more](#)

Load balanced

Instances

1

Min

4

Max

Elastic Beanstalk

Applications
Environments
Change history

▼ Application: Infotrix_PHP
Application versions
Saved configurations

▼ Environment: InfotrixPHP-env
Go to environment
Configuration
Events
Health
Logs
Monitoring

Elastic Beanstalk > Environments > InfotrixPHP-env

InfotrixPHP-env



Actions

Upload and deploy

Environment overview

Health
Green

Environment ID
e-nqtd2tybny

Domain
InfotrixPHP-env.eba-3iiafqd.us-east-1.elasticbeanstalk.com

Application name
Infotrix_PHP

Platform

Change version

Platform
PHP 8.2 running on 64bit Amazon Linux 2023/4.0.3

Running version
Infotrix_PHP-version-1.01

Platform state
Supported

Events Health Logs Monitoring Alarms Managed updates Tags

Events:

November 27, 2023 19:32:31 (UTC+5:30)	INFO	Environment update completed successfully.
November 27, 2023 19:32:31 (UTC+5:30)	INFO	Successfully deployed new configuration to environment.
November 27, 2023 19:32:31 (UTC+5:30)	INFO	New application version was deployed to running EC2 instances.
November 27, 2023 19:32:09 (UTC+5:30)	INFO	Instance deployment completed successfully.
November 27, 2023 19:32:02 (UTC+5:30)	INFO	Instance deployment: You didn't include a 'composer.json' file in your source bundle. The deployment didn't install Composer dependencies.
November 27, 2023 19:31:58 (UTC+5:30)	INFO	Deploying new version to instance(s).
November 27, 2023 19:31:39 (UTC+5:30)	INFO	Updating environment InfotrixPHP-env's configuration settings.
November 27, 2023 19:31:31 (UTC+5:30)	INFO	Environment update is starting.
November 27, 2023 19:28:50 (UTC+5:30)	INFO	Successfully launched environment: InfotrixPHP-env
November 27, 2023 19:28:49 (UTC+5:30)	INFO	Application available at InfotrixPHP-env.eba-3iiafqd.us-east-1.elasticbeanstalk.com.

Initiated a sample execution using PHP web application

← → ↻ ⚠ Not secure | infotrixphp-env.eba-3iiafqd.us-east-1.elasticbeanstalk.com

Congratulations!

Your AWS Elastic Beanstalk *PHP* application is now running on your own dedicated environment in the AWS Cloud

You are running PHP version 8.2.9

This environment is launched with Elastic Beanstalk PHP Platform

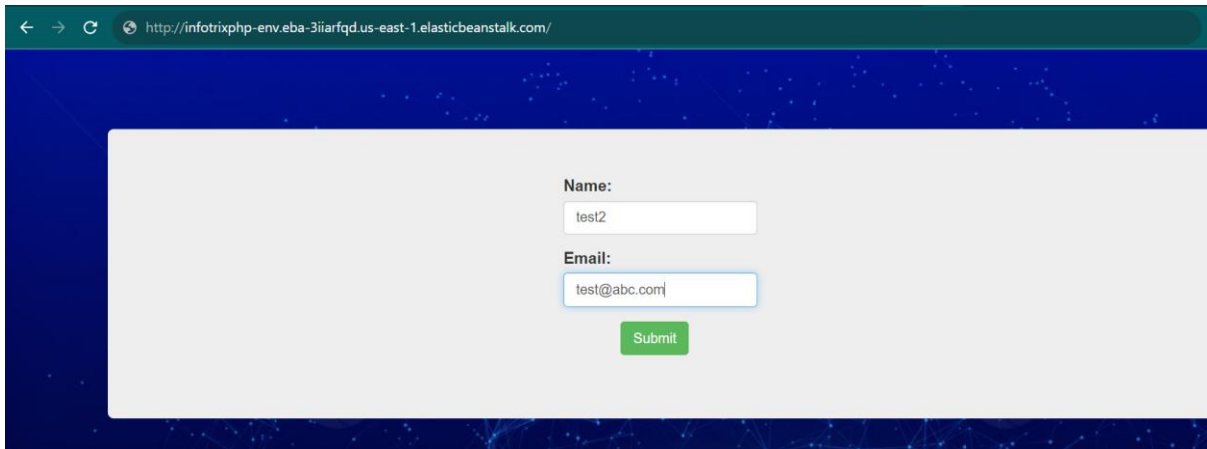
What's Next?

- [AWS Elastic Beanstalk overview](#)
- [Deploying AWS Elastic Beanstalk Applications in PHP Using Eb and Git](#)
- [Using Amazon RDS with PHP](#)
- [Customizing the Software on EC2 Instances](#)
- [Customizing Environment Resources](#)

AWS SDK for PHP

- [AWS SDK for PHP home](#)
- [PHP developer center](#)
- [AWS SDK for PHP on GitHub](#)

Upload and deployed Customized PHP web application.



A screenshot of a web browser displaying a form on a dark blue background with a starry pattern. The form is centered on a light gray rectangular area. It contains two input fields: 'Name:' with the value 'test2' and 'Email:' with the value 'test@abc.com'. Below the fields is a green 'Submit' button.

Application is Up and running

Connected to an RDS

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| intel       |
| mysql       |
| performance_schema |
| sys        |
+-----+
5 rows in set (0.00 sec)

mysql> use intel
Database changed
mysql> show tables;
Empty set (0.00 sec)

mysql> Create Table
->
-> ^C
mysql> show tables

Query OK, 0 rows affected (0.04 sec)

mysql> describe data;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| firstname | varchar(20) | YES | | NULL | |
| email | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> exit
Bye
root@ip-172-31-21-86:/var/www/html#
root@ip-172-31-21-86:/var/www/html# ls
images index.php
root@ip-172-31-21-86:/var/www/html# sudo nano index.php
root@ip-172-31-21-86:/var/www/html# mysql -h inforixproject.crqo4yptbbor.us-east-1.rds.amazonaws.com -u intel -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 25
Server version: 8.0.33 Source distribution
```

```
mysql> select * from data;
```

firstname	email
ghffgh	admin@admin.com
test1	admin@admin.com

```
3 rows in set (0.00 sec)
```



```
mysql> select * from data;
```

firstname	email
ghffgh	admin@admin.com
test1	admin@admin.com
test2	test@abc.com

```
4 rows in set (0.00 sec)
```

Conclusion:

Hence as per the requirements Developed a scalable web application using AWS Elastic Beanstalk, EC2, and RDS. The application is built to handle high traffic and dynamically scale resources as needed.