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## Project-2[Elastic Beanstalk with external RDS DB & blue green deployment]

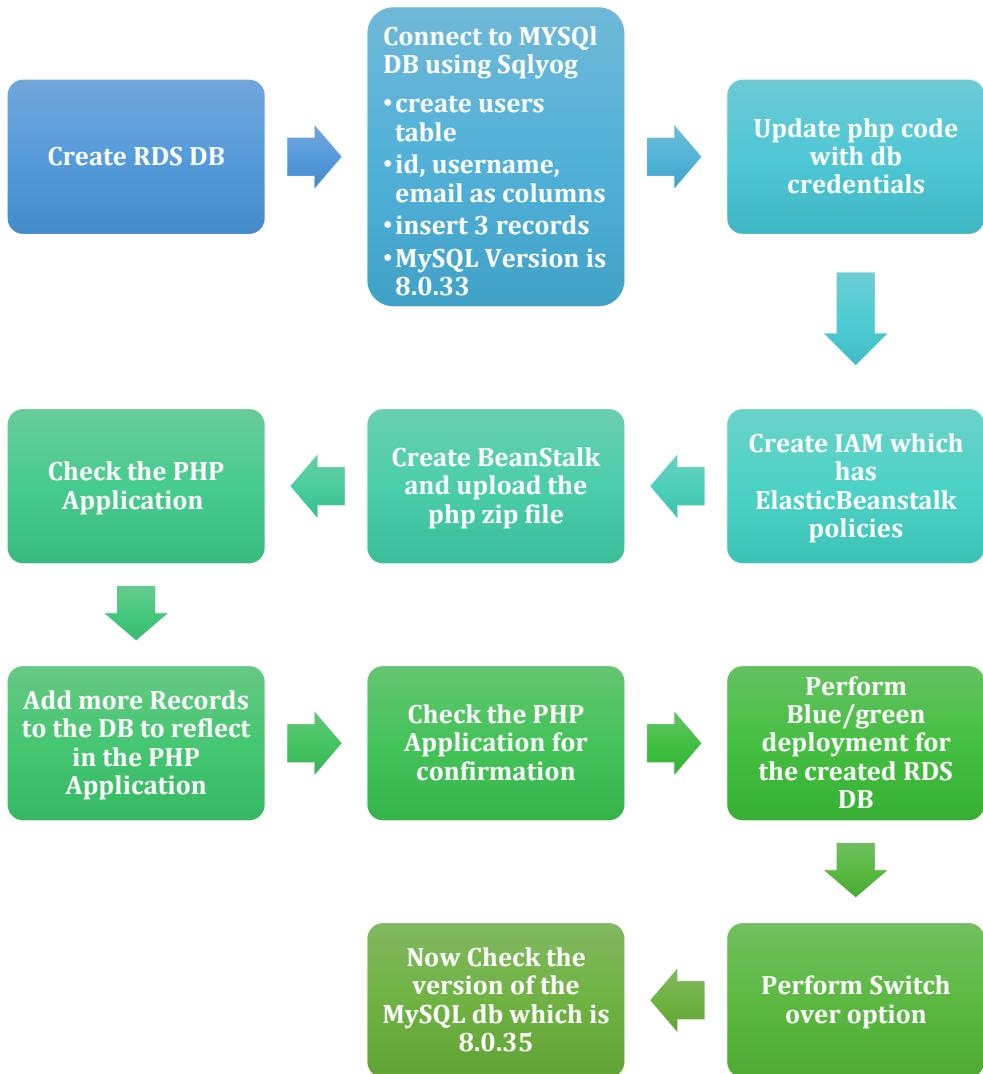
### Topics:

In this AWS project, you have to deploy a high-availability PHP application with an external Amazon RDS database to Elastic Beanstalk. Running a DB instance external to Elastic Beanstalk decouples the database from the lifecycle of your environment. This lets you connect to the same database from multiple environments, swap one database for another, or perform a blue/green deployment without affecting your database.

### Highlights:

Launch a DB instance in Amazon RDS Create an Elastic Beanstalk Environment Configure Security Groups and Scaling

## Work Flow



## Step-1: Create a rds db

The screenshot shows the AWS RDS Databases page. On the left, there's a sidebar with various options like Query Editor, Performance insights, and Subnet groups. The main area is titled "Databases (0)" and shows a table with columns for DB identifier, Status, Role, Engine, Region & AZ, Size, Recommendations, CPU, and Current activity. A prominent orange button at the top right says "Create database". Below the table, it says "No instances found". At the bottom, there are links for CloudShell, Feedback, and copyright information.

The screenshot shows the "Create database" page for MySQL. It starts with a section to "Choose a database creation method" with "Standard create" selected. Below that is the "Engine options" section where "MySQL" is chosen from a list. To the right, there's a detailed description of MySQL and a bulleted list of its features. At the bottom, there are links for CloudShell, Feedback, and copyright information.

The screenshot shows the MySQL engine details page. It includes sections for Edition ("MySQL Community" selected), Known issues/limitations, Engine version (MySQL 8.0.33 selected), and filters for Multi-AZ DB cluster and Amazon RDS Optimized Writes. To the right, there's a detailed description of MySQL and a bulleted list of its features. At the bottom, there are links for CloudShell, Feedback, and copyright information.

**Production**  
Use defaults for high availability and fast, consistent performance.

**Dev/Test**  
This instance is intended for development use outside of a production environment.

**Free tier**  
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

### Availability and durability

**Deployment options** [Info](#)  
The deployment options below are limited to those supported by the engine you selected above.

- Multi-AZ DB Cluster**  
Creates a DB cluster with a primary DB instance and two readable standby DB instances, with each DB instance in a different Availability Zone (AZ). Provides high availability, data redundancy and increases capacity to serve read workloads.
- Multi-AZ DB instance (not supported for Multi-AZ DB cluster snapshot)**  
Creates a primary DB instance and a standby DB instance in a different AZ. Provides high availability and data redundancy, but the standby DB instance doesn't support connections for read workloads.
- Single DB instance (not supported for Multi-AZ DB cluster snapshot)**  
Creates a single DB instance with no standby DB instances.

### Settings

**DB instance identifier** [Info](#)  
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

**MySQL**

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL Community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within a single Region or 5 read replicas cross-region.

### Settings

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**Master username** [Info](#)  
Type a login ID for the master user of your DB instance.

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**Instance configuration**

The DB instance configuration options below are limited to those supported by the engine that you selected above.

**DB instance class** [Info](#)

**Show instance classes that support Amazon RDS Optimized Writes** [Info](#)  
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

**Include previous generation classes**

- Standard classes (includes m classes)
- Memory optimized classes (includes r and x classes)
- Burstable classes (includes t classes)**

**db.t2.micro**  
1 vCPUs 1 GiB RAM Not EBS Optimized

**Storage**

**Storage type** [Info](#)  
General Purpose SSD (gp2)  
Baseline performance determined by volume size

**Allocated storage** [Info](#)  
20 GiB  
The minimum value is 20 GiB and the maximum value is 6,144 GiB.

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**Connectivity**

**Compute resource**  
Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

**Don't connect to an EC2 compute resource**  
Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

**Connect to an EC2 compute resource**  
Set up a connection to an EC2 compute resource for this database.

**Network type** [Info](#)  
To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

**IPv4**  
Your resources can communicate only over the IPv4 addressing protocol.

**Dual-stack mode**  
Your resources can communicate over IPv4, IPv6, or both.

**Virtual private cloud (VPC)** [Info](#)  
Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

**Default VPC (vpc-01fd74f1bd59054)**  
6 Subnets, 6 Availability Zones

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**DB subnet group** [Info](#)  
Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

**DB Subnet group - info**

Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

**default**  
6 Subnets, 6 Availability Zones

**Public access - Info**

Yes  
RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

No  
RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

**VPC security group (firewall) - Info**

Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

Choose existing  
Choose existing VPC security groups

Create new  
Create new VPC security group

**Existing VPC security groups**

Choose one or more options

sql X ssh-sg X altratric X http-sg X

**Availability Zone - Info**

No preference

**RDS Proxy**

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**RDS Proxy**

RDS Proxy is a fully managed, highly available database proxy that improves application scalability, resiliency, and security.

Create an RDS Proxy - Info  
RDS automatically creates an IAM role and a Secrets Manager secret for the proxy. RDS Proxy has additional costs. For more information, see [Amazon RDS Proxy pricing](#).

**Certificate authority - optional - Info**

Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provision.

rds-ca-sa2048-g1 (default)  
Expiry: May 26, 2061

If you don't select a certificate authority, RDS chooses one for you.

**Additional configuration**

**Database authentication**

**Database authentication options - Info**

Password authentication  
Authenticates using database passwords.

Password and IAM database authentication  
Authenticates using the database password and user credentials through AWS IAM users and roles.

Password and Kerberos authentication  
Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

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**Monitoring**

Enable Enhanced Monitoring  
Enabling Enhanced Monitoring metrics are useful when you want to see how different processes or threads use the CPU.

**Additional configuration**

Database options

Initial database name - Info  
test

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group - Info  
default.mysql8.0

Option group - Info  
default:mysql-8-0

Backup

Enable automated backups

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Screenshot of the AWS RDS MySQL configuration page for a database named "default:mysql-8-0".

**Backup**

Enable automated backups  
Creates a point-in-time snapshot of your database

**Backup retention period** [Info](#)  
The number of days (1-35) for which automatic backups are kept.  
1 day

**Backup window** [Info](#)  
The daily time range (in UTC) during which RDS takes automated backups.  
 Choose a window  
 No preference

Copy tags to snapshots

**Backup replication** [Info](#)  
 Enable replication in another AWS Region  
Enabling replication automatically creates backups of your DB instance in the selected Region, for disaster recovery, in addition to the current Region.

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**Log exports**  
Select the log types to publish to Amazon CloudWatch Logs  
 Audit log  
 Error log  
 General log  
 Slow query log

**IAM role**  
The following service-linked role is used for publishing logs to CloudWatch Logs.  
RDS service-linked role

**Maintenance**

**Auto minor version upgrade** [Info](#)  
 Enable auto minor version upgrade  
Enabling auto minor version upgrade will automatically upgrade to new minor versions as they are released. The automatic upgrades occur during the maintenance window for the database.

**Maintenance window** [Info](#)  
Select the period you want pending modifications or maintenance applied to the database by Amazon RDS.  
 Choose a window  
 No preference

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Screenshot of the AWS RDS MySQL configuration page for a database named "default:mysql-8-0".

Enable deletion protection  
Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

**Estimated Monthly costs**

DB instance	12.41 USD
Storage	2.50 USD
Total	<b>14.71 USD</b>

This billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, IOs (if applicable), or data transfer.

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#).

**Estimated monthly costs**

The Amazon RDS Free Tier is available to you for 12 months. Each calendar month, the free tier will allow you to use the Amazon RDS resources listed below for free:

- 750 hrs of Amazon RDS in a Single-AZ db.t2.micro, db.t3.micro or db.t4g.micro Instance.
- 20 GB of General Purpose Storage (SSD).
- 20 GB for automated backup storage and any user-initiated DB Snapshots.

[Learn more about AWS Free Tier](#).

When your free usage expires or if your application use exceeds the free usage tiers, you simply pay standard,

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**AWS Services** Search [Alt+S]

Total 14.71 USD

This billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, IOs (if applicable), or data transfer.

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#).

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Learn more about AWS Free Tier.

When your free usage expires or if your application use exceeds the free usage tiers, you simply pay standard, pay-as-you-go service rates as described in the [Amazon RDS Pricing](#) page.

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Cancel **Create database**

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**Amazon RDS**

Databases

Creating database myphpproject

Your database might take a few minutes to launch.

You can use settings from myphpproject to simplify configuration of [suggested database add-ons](#) while we finish creating your DB for you.

**RDS > Databases**

**Databases (1)**

Group resources **Create database**

DB identifier	Status	Role	Engine	Region & AZ	Size	Recommendations	CPU
myphpproject	Creating	Instance	MySQL Community	-	db.t2.micro	-	-

View credential details

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**RDS > Databases**

**Databases (1)**

Group resources **Create database**

DB identifier	Status	Role	Engine	Region & AZ	Size	Recommendations	CPU
myphpproject	Available	Instance	MySQL Community	us-east-1f	db.t2.micro	-	-

CloudShell Feedback azon.com/rds/home?region=us-east-1#query-editor. © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

## Step-2: Copy endpoint of the created rds db

The screenshot shows the AWS RDS console for a MySQL Community instance named 'myphpproject'. The 'Connectivity & security' tab is selected. Key details include:

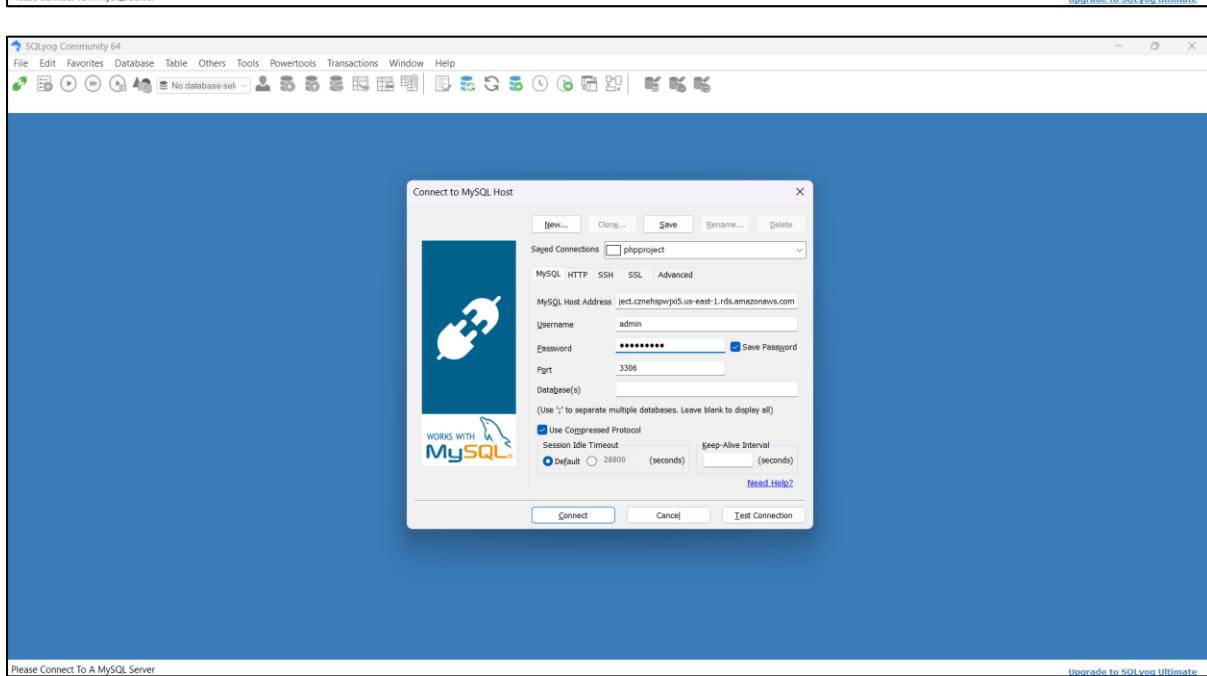
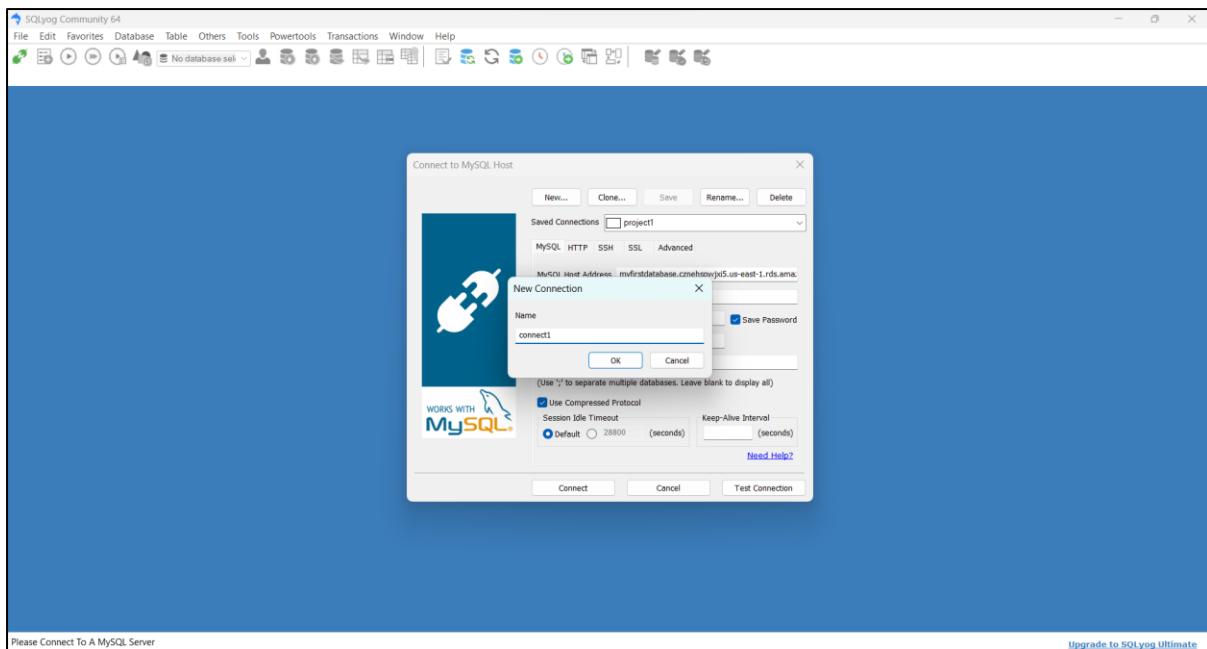
Endpoint	Port	Networking	Security
myphpproject.cznehpwpjxi5.us-east-1.rds.amazonaws.com	3306	Availability Zone: us-east-1a VPC: vpc-01f0d74ff1bd59054 Subnet group: default Subnets: subnet-07fd112f4f7c34bd5, subnet-015157b5632abb67, subnet-0d9faf25f74febe6c3	VPC security groups: sql (sg-0c43cdcc5172b9dc1) (Active) ssh-sg (sg-090cd5a7fdf8473c6) (Active) http-sg (sg-0c318d57ba9974899) (Active) Publicly accessible: Yes Certificate authority: rds-ca-rsa2048-g1

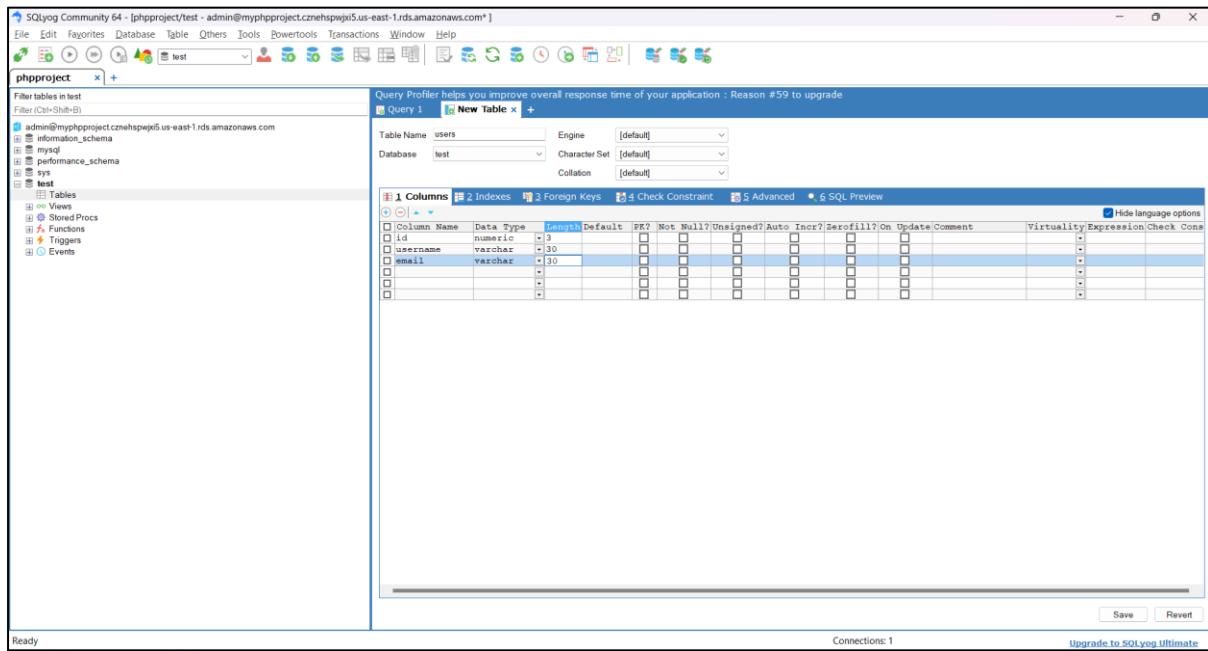
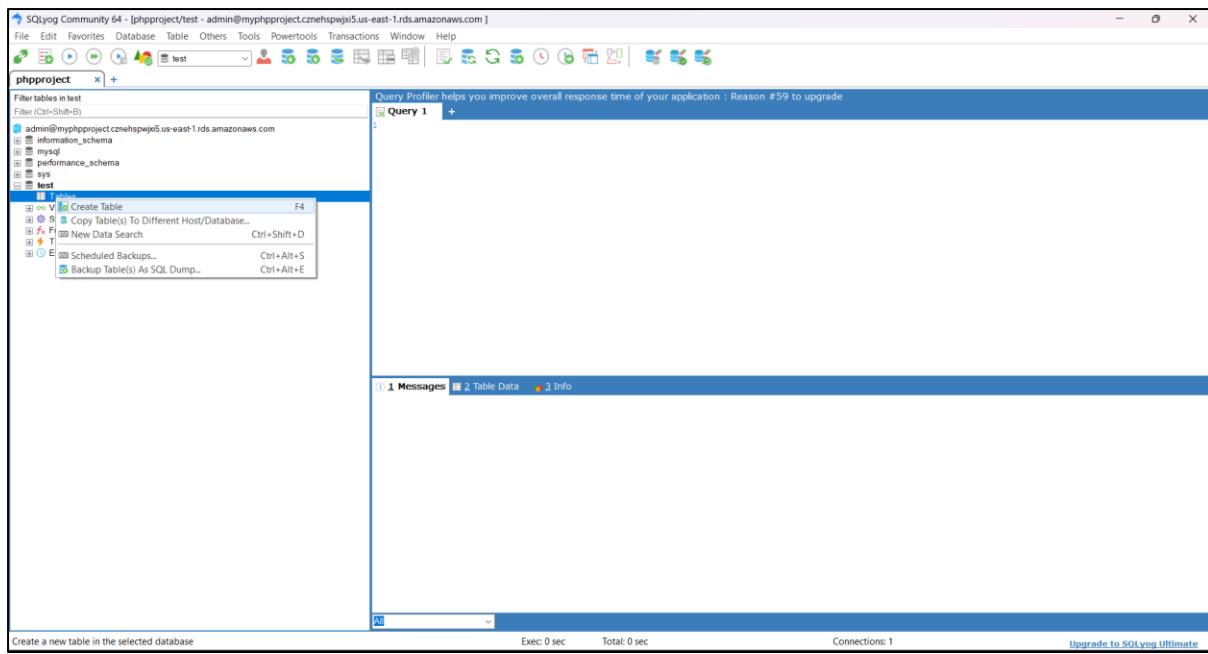
The screenshot shows the AWS RDS console for the same MySQL instance. The 'Configuration' tab is selected. Key details include:

Configuration	Instance class	Storage	Performance Insights
DB instance ID: myphpproject Engine version: 8.0.33 DB name: test License model: General Public License Option groups	Instance class: db.t2.micro vCPU: 1 RAM: 1 GB Availability: Master username	Encryption: Not enabled Storage type: General Purpose SSD (gp2) Storage: 20 GiB Provisioned IOPS: - Storage throughput	Performance Insights enabled: Turned off Published logs: CloudWatch Logs (Audit, Error, General, Slow query)

## Step-3: Connect to mysql db with the required credentials

- Create a table users with id, username, email as columns
- Insert 3 records into the users table
- Check the mysql db also





SQLyog Community 64 - [phpproject/test - admin@myphpproject.cznehspwjd5.us-east-1.rds.amazonaws.com]

File Edit Favorites Database Table Others Tools Powertools Transactions Window Help

Filter (Ctrl+Shift+B)

Table Name: users Engine: InnoDB

Database: test Character Set: utf8mb4

Collation: utf8mb4\_0900\_ai\_ci

**1 Column 2 Indexes 3 Foreign Keys 4 Check Constraint 5 Advanced 6 SQL Preview**

**Column**

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update	Comment	Virtuality	Expression/Check Cons.
<input checked="" type="checkbox"/> id	decimal(3,0)			<input checked="" type="checkbox"/>	(none)							
<input checked="" type="checkbox"/> username	varchar	30		<input checked="" type="checkbox"/>	(none)							
<input checked="" type="checkbox"/> email	varchar	30		<input checked="" type="checkbox"/>	(none)							

**Actions**

- Paste SQL Statement
- Copy Table(s) To Different Host/Database...
- New Data Search
- Ctrl+Shift+D
- Open Table
- Open Table in New Tab
- Create Table
- Alter Table
- Manage Indexes
- Relationships/Foreign Keys
- More Table Operations
- Backup/Export
- Import
- Create Trigger...

View table data

Connections: 1

Upgrade to SQLyog Ultimate

SQLyog Community 64 - [phpproject/test - admin@myphpproject.cznehspwjd5.us-east-1.rds.amazonaws.com]

File Edit Favorites Database Table Others Tools Powertools Transactions Window Help

Filter (Ctrl+Shift+B)

Table Name: users Engine: InnoDB

Database: test Character Set: utf8mb4

Collation: utf8mb4\_0900\_ai\_ci

**1 Messages 2 Table Data 3 Info**

1

1 Messages

2 Table Data

3 Info

Database: test Table: users

2 row(s)

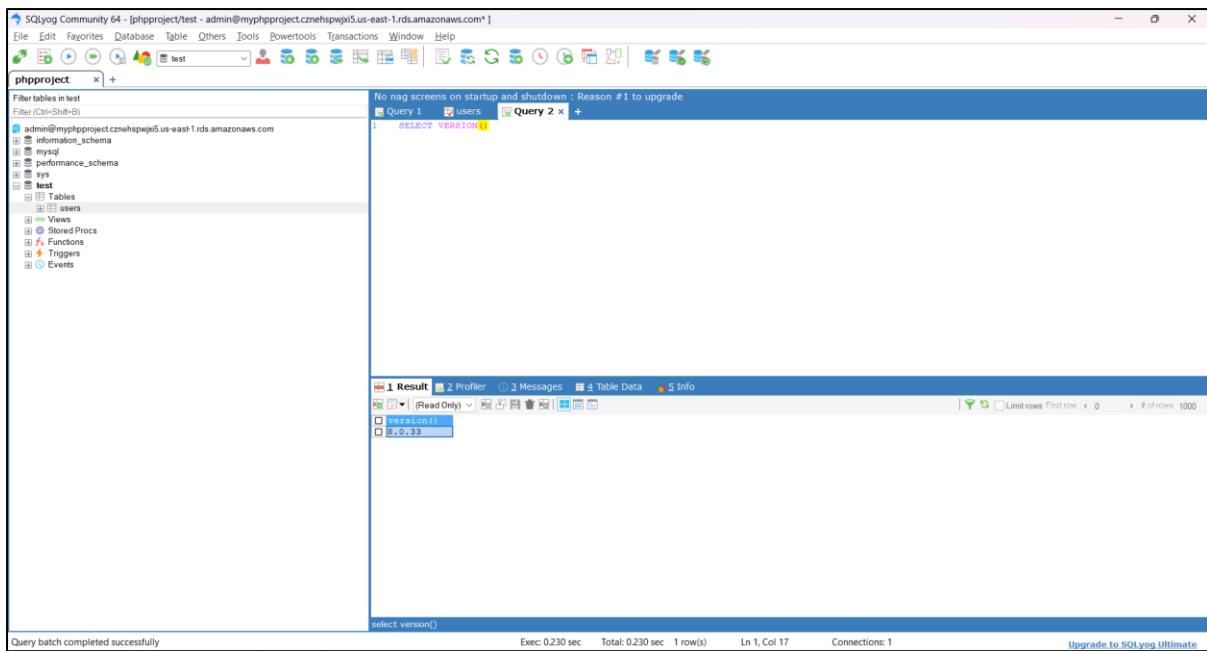
Connections: 1

Ready

Data modified but not saved

Upgrade to SQLyog Ultimate

id	username	email
1	aa Save Changes@gmail.	
2	rohit	rohit@gmail.com
3	chintu	chintu@gmail.com
(NULL)	(NULL)	(NULL)



**Step-4:** update the php code with rds endpoint, dbname, username, password and zip it

```
<?php
```

```
// Database configuration
```

```
$host = 'myphpproject.cznehspwjxi5.us-east-1.rds.amazonaws.com';
$dbname = 'test';
$username = 'admin';
$password = 'admin1234';
```

```
try {
```

```
// Establish a database connection
```

```
$conn = new PDO("mysql:host=$host;dbname=$dbname", $username, $password);
$conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
```

```
// Sample query to fetch users
```

```
$query = "SELECT * FROM users";
$stmt = $conn->prepare($query);
```

```
if ($stmt->execute()) {
```

```
// Fetch all data into an array
```

```
$users = $stmt->fetchAll(PDO::FETCH_ASSOC);

// Display fetched data in a styled table
echo "<style>
table {
    width: 50%;
    border-collapse: collapse;
    margin: 20px;
}
th, td {
    padding: 10px;
    text-align: left;
    border: 1px solid #ddd;
}
th {
    background-color: #f2f2f2;
}
</style>";

echo "<h2>Users:</h2>";
echo "<table>";
echo "<tr><th>ID</th><th>Username</th><th>Email</th></tr>";
foreach ($users as $user) {
    echo "<tr>";
    echo "<td>{$user['id']}</td>";
    echo "<td>{$user['username']}</td>";
    echo "<td>{$user['email']}</td>";
    echo "</tr>";
}
echo "</table>";
```

```

} else {
    echo "Query execution failed.";
}

// Close the connection
$conn = null;

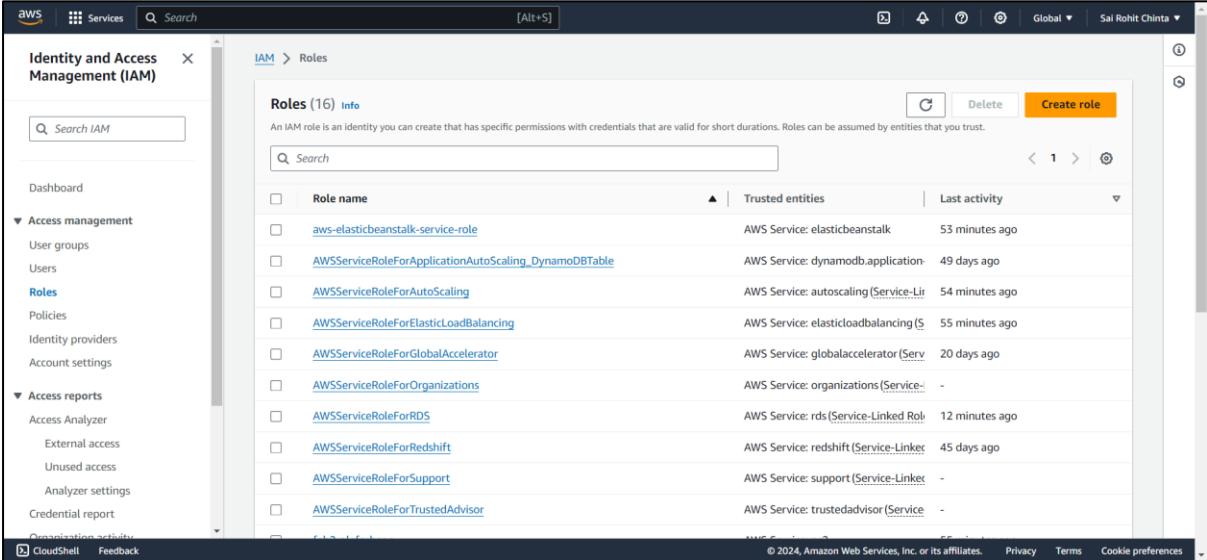
} catch (PDOException $e) {
    // Handle database connection errors
    echo "Error: " . $e->getMessage();
}

?>

```

**Step-5:** Create an IAM role for the ec2 profile which has following policies

- AWSElasticBeanstalkWebTier
- AWSElasticBeanstalkWorkerTier
- AWSElasticBeanstalkMultiContainerDocker



The screenshot shows the AWS Identity and Access Management (IAM) service interface. On the left, there's a navigation sidebar with options like Dashboard, User groups, Users, Roles (which is selected), Policies, Identity providers, and Account settings. The main content area is titled 'Roles (16) Info' and contains a table listing 16 different IAM roles. The columns in the table are 'Role name', 'Trusted entities', and 'Last activity'. Each row shows a role name, its associated AWS service, and the last time it was used. For example, 'aws-elasticbeanstalk-service-role' was last used 53 minutes ago by the 'elasticbeanstalk' service. Other roles listed include 'AWSRoleForApplicationAutoScaling\_DynamoDBTable', 'AWSRoleForAutoScaling', 'AWSRoleForElasticLoadBalancing', 'AWSRoleForGlobalAccelerator', 'AWSRoleForOrganizations', 'AWSRoleForRDS', 'AWSRoleForRedshift', 'AWSRoleForSupport', and 'AWSRoleForTrustedAdvisor'. At the top right of the table, there are buttons for 'Create role' and 'Delete'.

Role name	Trusted entities	Last activity
aws-elasticbeanstalk-service-role	AWS Service: elasticbeanstalk	53 minutes ago
AWSRoleForApplicationAutoScaling_DynamoDBTable	AWS Service: dynamodb.application	49 days ago
AWSRoleForAutoScaling	AWS Service: autoscaling (Service-Linker)	54 minutes ago
AWSRoleForElasticLoadBalancing	AWS Service: elasticloadbalancing (Service-Linker)	55 minutes ago
AWSRoleForGlobalAccelerator	AWS Service: globalaccelerator (Service-Linker)	20 days ago
AWSRoleForOrganizations	AWS Service: organizations (Service-Linker)	-
AWSRoleForRDS	AWS Service: rds (Service-Linked Role)	12 minutes ago
AWSRoleForRedshift	AWS Service: redshift (Service-Linker)	45 days ago
AWSRoleForSupport	AWS Service: support (Service-Linker)	-
AWSRoleForTrustedAdvisor	AWS Service: trustedadvisor (Service-Linker)	-

Screenshot of the AWS IAM 'Create role' wizard Step 1: Select trusted entity.

The 'Trusted entity type' section shows four options:

- AWS service: Allow AWS services like EC2, Lambda, or others to perform actions in this account.
- AWS account: Allow entities in other AWS accounts belonging to you or a 3rd party to perform actions in this account.
- Web identity: Allows users federated by the specified external web identity provider to assume this role to perform actions in this account.
- SAML 2.0 federation: Allow users federated with SAML 2.0 from a corporate directory to perform actions in this account.
- Custom trust policy: Create a custom trust policy to enable others to perform actions in this account.

The 'Use case' section shows a note: "Allow an AWS service like EC2, Lambda, or others to perform actions in this account." A dropdown menu shows "EC2" selected under "Service or use case".

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Screenshot of the AWS IAM 'Create role' wizard Step 2: Choose a use case for the specified service.

The 'Choose a use case for the specified service' section shows the "EC2" use case selected under "Use case". Other options include:

- EC2: Allows EC2 instances to call AWS services on your behalf.
- EC2 Role for AWS Systems Manager: Allows EC2 instances to call AWS services like CloudWatch and Systems Manager on your behalf.
- EC2 Spot Fleet Role: Allows EC2 Spot Fleet to request and terminate Spot Instances on your behalf.
- EC2 - Spot Fleet Auto Scaling: Allows Auto Scaling to access and update EC2 spot fleets on your behalf.
- EC2 - Spot Fleet Tagging: Allows EC2 to launch spot instances and attach tags to the launched instances on your behalf.
- EC2 - Spot Instances: Allows EC2 Spot Instances to launch and manage spot instances on your behalf.
- EC2 - Spot Fleet: Allows EC2 Spot Fleet to launch and manage spot fleet instances on your behalf.
- EC2 - Scheduled Instances: Allows EC2 Scheduled Instances to manage instances on your behalf.

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Screenshot of the AWS IAM 'Create role' wizard Step 3: Add permissions.

The 'Permissions policies' section shows a search bar with "web" and a table of policies:

Policy name	Type	Description
AmazonWorkSpacesWebReadOnly	AWS managed	Provides read-only access to Amazon ...
AWSElasticBeanstalkWebTier	AWS managed	Provide the instances in your web serv...

A checkbox next to "AWSElasticBeanstalkWebTier" is checked. A note at the bottom says "Set permissions boundary - optional".

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Screenshot of the AWS IAM 'Create role' wizard Step 2: Add permissions.

The 'Permissions policies' section shows a search bar with 'worker' and a table with 7 matches:

Policy name	Type	Description
AmazonEKSWorkerNodePolicy	AWS managed	This policy allows Amazon EKS worker ...
AmazonNimbleStudio-LaunchProfileW...	AWS managed	This policy grants access to resources ...
AWSElasticBeanstalkRoleWorkerTier	AWS managed	(Elastic Beanstalk operations role) Allo...
<b>AWSElasticBeanstalkWorkerTier</b>	AWS managed	Provide the instances in your worker e...
AWSThinkboxAWSPortalWorkerPolicy	AWS managed	This policy grants the Deadline Worker...
AWSThinkboxDeadlineSpotEventPlugi...	AWS managed	Grant permissions required for an EC2 ...
ROSAWorkerInstancePolicy	AWS managed	Allows Red Hat OpenShift Service on ...

Below the table is a note: 'Set permissions boundary - optional'.

Screenshot of the AWS IAM 'Create role' wizard Step 2: Add permissions.

The 'Permissions policies' section shows a search bar with 'docker' and a table with 1 match:

Policy name	Type	Description
<b>AWSElasticBeanstalkMulticontainerDoc...</b>	AWS managed	Provide the instances in your multicon...

Below the table is a note: 'Set permissions boundary - optional'.

Screenshot of the AWS IAM 'Create role' wizard Step 3: Name, review, and create.

The 'Role details' section contains:

- Role name:** BeanstalkRoleforproject (highlighted)
- Description:** Allows EC2 instances to call AWS services on your behalf.

The 'Step 1: Select trusted entities' section shows a 'Trust policy' editor with the following JSON:

```
1 + [ { "version": "2012-10-17", "Statement": [ }
```

**Step 1: Select trusted entities**

Trust policy

```

1- [ {
2-     "Version": "2012-10-17",
3-     "Statement": [
4-         {
5-             "Effect": "Allow",
6-             "Action": [
7-                 "sts:AssumeRole"
8-             ],
9-             "Principal": {
10-                 "Service": [
11-                     "ec2.amazonaws.com"
12-                 ]
13-             }
14-         }
15-     ]
16- }

```

**Step 2: Add permissions**

Permissions policy summary

Policy name	Type	Attached as
AWS-Elastic-Beanstalk-MultiContainer-Docker	AWS managed	Permissions policy

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**Step 2: Add permissions**

Permissions policy summary

Policy name	Type	Attached as
AWS-Elastic-Beanstalk-MultiContainer-Docker	AWS managed	Permissions policy
AWS-Elastic-Beanstalk-Web-Tier	AWS managed	Permissions policy
AWS-Elastic-Beanstalk-Worker-Tier	AWS managed	Permissions policy

**Step 3: Add tags**

Add tags - optional info  
Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.

No tags associated with the resource.

Add new tag  
You can add up to 50 more tags.

Cancel Previous Create role © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Identity and Access Management (IAM)

Role BeanstalkRoleforproject created.

View role Delete Create role

Roles (17) info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Role name	Trusted entities	Last activity
AWS-Service-Role-For-Organizations	AWS Service: organizations (Service-Linked Role)	-
AWS-Service-Role-For-RDS	AWS Service: rds (Service-Linked Role)	15 minutes ago
AWS-Service-Role-For-Redshift	AWS Service: redshift (Service-Linked Role)	45 days ago
AWS-Service-Role-For-Support	AWS Service: support (Service-Linked Role)	-
AWS-Service-Role-For-Trusted-Advisor	AWS Service: trustedadvisor (Service-Linked Role)	-
BeanstalkRoleforproject	AWS Service: ec2	-
feb2roleforbean	AWS Service: ec2	58 minutes ago
Project1Role	AWS Service: ec2	2 days ago
rds-monitoring-role	AWS Service: monitoring.rds	-
Role1	AWS Service: ec2	-
Role1forOps	AWS Service: opsworks	-

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## Step-6: Create an Elastic beanstalk with php environment and upload php zip file

The screenshot shows the AWS Elastic Beanstalk Applications page. On the left, there's a sidebar with 'Recent environments' listed: Test-env, Test2-env, Newtry1-env, Try-env, and Project1-env. The main area is titled 'Applications (0) Info' and shows a table with columns for 'Application name', 'Environments', 'Date created', and 'Last modified'. A message at the bottom says 'No applications' and 'No applications to display'. At the top right, there's a 'Create application' button.

The screenshot shows the 'Create new application' wizard. The first step, 'Application information', is displayed. It has fields for 'Application name' (set to 'PhpProject') and 'Description' (set to 'PhpProject'). Below these fields is a 'Tags' section with instructions and a note about adding tags. At the bottom of the screen, there are 'Cancel' and 'Create' buttons.

This screenshot is identical to the previous one, showing the 'Create new application' wizard in step 1. The 'Create' button at the bottom right is now highlighted in orange, indicating it is the next action to be taken.

Screenshot of the AWS Elastic Beanstalk console showing the application environment list for "PhpProject".

The left sidebar shows:

- Applications
- Environments
- Change history
- Application: PhpProject**
  - Application versions
  - Saved configurations
- Recent environments**
  - Test-env
  - Test2-env
  - Newtry1-env
  - Try-env
  - Project1-env

The main content area shows the "Application PhpProject environments (0) Info" section with a search bar and a "Create new environment" button.

Screenshot of the "Configure environment" wizard Step 1: "Configure environment".

The left sidebar shows the steps:

- 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

The main content area includes sections for:

- Environment tier** (Info): Describes two types of environment tiers: Web server environment (selected) and Worker environment.
- Application information** (Info): Application name is set to "PhpProject".
- Environment information** (Info): Describes environment naming rules.

Screenshot of the "Configure environment" wizard Step 6: "Review".

The main content area includes sections for:

- Application tags (optional)**: A placeholder for application tags.
- Environment information** (Info): Describes environment naming rules.
- Environment name**: Set to "PhpProject-env".
- Domain**: Set to "Leave blank for autogenerated value .us-east-1.elasticbeanstalk.com". A "Check availability" button is present.
- Environment description**: An empty text area.
- Platform** (Info): Platform type is set to "Managed platform".

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

Environment description

**Platform Info**

Platform type  
 Managed platform Platforms published and maintained by Amazon Elastic Beanstalk. Learn more [Learn more](#)  
 Custom platform Platforms created and owned by you. This option is unavailable if you have no platforms.

Platform PHP

Platform branch PHP 8.2 running on 64bit Amazon Linux 2023

Platform version 4.0.5 (Recommended)

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.0.5 (recommended)

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

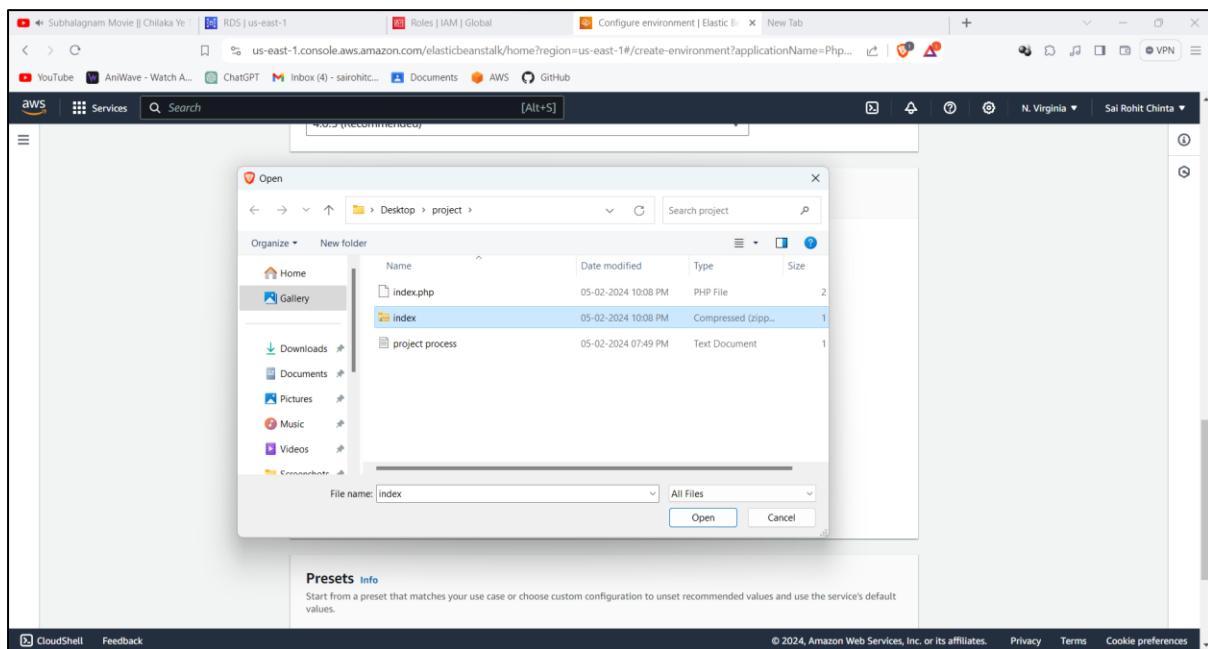
Sample application  
 Existing version Application versions that you have uploaded.  
 Upload your code Upload a source bundle from your computer or copy one from Amazon S3.

Version label Unique name for this version of your application code.  
1

Source code origin Maximum size 500 MB  
 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.

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**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.

Source code origin. Maximum size 500 MB

Local file

Upload application  
  
 File name: **index.zip**  
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.

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**Application code** Info

Source code origin. Maximum size 500 MB

Local file

Upload application  
  
 File name: **index.zip**  
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

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**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](#)

**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.

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

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

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**Set up networking, database, and tags - optional**

**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-01f0d74ff1bd59054 | (172.31.0.0/16)

[Create custom VPC](#)

**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

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**and logging**

Step 6 Review

**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
us-east-1c	subnet-015157b5...	172.31.80.0/20	
us-east-1a	subnet-07fd112f4f...	172.31.32.0/20	
us-east-1b	subnet-0b3c867bc...	172.31.0.0/20	
us-east-1e	subnet-0d9faf25f7...	172.31.48.0/20	
us-east-1f	subnet-0de596260...	172.31.64.0/20	
us-east-1d	subnet-0f61af81d...	172.31.16.0/20	

**Database info**

Integrate an RDS SQL database with your environment. [Learn more](#)

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**Database info**

Integrate an RDS SQL database with your environment. [Learn more](#)

**Database subnets**

If your Elastic Beanstalk environment is attached to an Amazon RDS, choose subnets for your database instances. [Learn more](#)

**Choose database subnets (6)**

Filter database subnets

Availability Zone	Subnet	CIDR	Name
us-east-1c	subnet-015157b5...	172.31.80.0/20	
us-east-1a	subnet-07fd112f4f...	172.31.32.0/20	
us-east-1b	subnet-0b3c867bc...	172.31.0.0/20	
us-east-1e	subnet-0d9faf25f7...	172.31.48.0/20	
us-east-1f	subnet-0de596260...	172.31.64.0/20	
us-east-1d	subnet-0f61af81d...	172.31.16.0/20	

Enable database

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**Enable database**

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

**Snapshot**  
manual1000pm

**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.  
20 GB

**Username**

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**Instance class** db.t2.micro

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

**Username** admin

**Password**

**Availability** High (Multi-AZ)

**Database deletion policy**  
This policy applies when you decouple a database or terminate the environment coupled to it.

**Create snapshot**  
Elastic Beanstalk saves a snapshot of the database and then deletes it. You can restore a database from a snapshot when you add a DB to an Elastic Beanstalk environment or when you create a standalone database. You might incur charges for storing database snapshots.

**Retain**  
The decoupled database will remain available and operational external to Elastic Beanstalk.

**Delete**  
Elastic Beanstalk terminates the database. The database will no longer be available.

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**Availability** High (Multi-AZ)

**Database deletion policy**  
This policy applies when you decouple a database or terminate the environment coupled to it.

**Create snapshot**  
Elastic Beanstalk saves a snapshot of the database and then deletes it. You can restore a database from a snapshot when you add a DB to an Elastic Beanstalk environment or when you create a standalone database. You might incur charges for storing database snapshots.

**Retain**  
The decoupled database will remain available and operational external to Elastic Beanstalk.

**Delete**  
Elastic Beanstalk terminates the database. The database will no longer be available.

**Tags**  
Apply up to 50 tags. You can use tags to group and filter your resources. A tag is a key-value pair. The key must be unique within the resource and is case-sensitive. [Learn more](#)

No tags associated with the resource.

**Add new tag**  
You can add 50 more tags.

**Cancel** **Skip to review** **Previous** **Next**

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**Configure instance traffic and scaling - optional**

**Instances** Info

Configure the Amazon EC2 instances that run your application.

**Root volume (boot device)**

**Root volume type**: Container default

**Size**: 8 GB

**IOPS**: 100 IOPS

**Throughput**: 125 MiB/s

**Amazon CloudWatch monitoring**

The time interval between when metrics are reported from the EC2 instances

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**Throughput**

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

125 MiB/s

**Amazon CloudWatch monitoring**

The time interval between when metrics are reported from the EC2 instances

**Monitoring interval**: 5 minute

**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.

Deactivated

**EC2 security groups**

Select security groups to control traffic.

**EC2 security groups (13)**

Group name	Group ID	Name
ALLTraffic	sg-0056599c6afebabfc	
alltraffic	sg-0099489c2823f8553	
db-sg	sg-0d9a2c5627d148748	
default	sg-0dc240f2f46747a78	
http-sg	sg-0c318d57ba9974899	
launch-wizard-1	sg-07a8dd2af17aed3dd	
master-session-sg	sg-0bc2e4b91e9a7ba7f	
rdp	sg-0c5cba4dbc321e65d	
rds-default-vpc-01f0d74ff1...	sg-03d7eadacd9587c19	
SG-ALB	sg-03f94d10bfa58ae7e	
SG-ASG	sg-0556ece521576e3eb	
sql	sg-0c43cdcc5172b9dc1	
ssh-sg	sg-090cd3a7fdf8473c6	

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**Filter security groups**

Group name	Group ID	Name
ALLTraffic	sg-0056599c6afebabfc	
alltraffic	sg-0099489c2823f8553	
db-sg	sg-0d9a2c5627d148748	
default	sg-0dc240f2f46747a78	
http-sg	sg-0c318d57ba9974899	
launch-wizard-1	sg-07a8dd2af17aed3dd	
master-session-sg	sg-0bc2e4b91e9a7ba7f	
rdp	sg-0c5cba4dbc321e65d	
rds-default-vpc-01f0d74ff1...	sg-03d7eadacd9587c19	
SG-ALB	sg-03f94d10bfa58ae7e	
SG-ASG	sg-0556ece521576e3eb	
sql	sg-0c43cdcc5172b9dc1	
ssh-sg	sg-090cd3a7fdf8473c6	

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**Capacity Info**

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

**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**

Min  
2  
 Max  
4

**Fleet composition**  
Spot instances are launched at the lowest available price. [Learn more](#)

On-Demand instances

Combine purchase options and instances

**Maximum spot price**  
The maximum price per instance-hour, in USD, that you're willing to pay for a Spot Instance. Setting a custom price limits your chances to fulfill your target capacity using Spot instances.

Default

Set your maximum price

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**On-Demand above base**  
The percentage of On-Demand Instances as part of any additional capacity that your Auto Scaling group provisions beyond the On-Demand base instances.  
70 %

**Capacity rebalancing**  
Specifies whether to enable the capacity rebalancing feature for Spot Instances in your Auto Scaling Group. This option is only relevant when EnableSpot is true in the awsec2:instances namespace, and there is at least one Spot Instance in your Auto Scaling group.  
 Turn on capacity rebalancing

**Architecture**  
The processor architecture determines the instance types that are made available. You can't change this selection after you create the environment. [Learn more](#)

x86\_64  
This architecture uses x86 processors and is compatible with most third-party tools and libraries.

arm64 - new  
This architecture uses AWS Graviton2 processors. You might have to recompile some third-party tools and libraries.

**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

**AMI ID**  
Elastic Beanstalk selects a default Amazon Machine Image (AMI) for your environment based on the Region, platform version, and processor architecture that you choose. [Learn more](#)

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**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

**AMI ID**  
Elastic Beanstalk selects a default Amazon Machine Image (AMI) for your environment based on the Region, platform version, and processor architecture that you choose. [Learn more](#)

ami-072b7b1fdb1ab1acc

**Availability Zones**  
Number of Availability Zones (AZs) to use.  
Any

**Placement**  
Specify Availability Zones (AZs) to use.  
 Choose Availability Zones (AZs)

**Scaling cooldown**  
360 seconds

**Scaling triggers**

Metric

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**Scaling triggers**

**Metric**  
Change the metric that is monitored to determine if the environment's capacity is too low or too high.

**NetworkOut**

**Statistic**  
Choose how the metric is interpreted.

**Average**

**Unit**  
Bytes

**Period**  
The period between metric evaluations.

**5 Min**

**Breach duration**  
The amount of time a metric can exceed a threshold before triggering a scaling operation.

**5 Min**

**Upper threshold**  
600000

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**Load balancer network settings**

**Visibility**  
Make your load balancer internal if your application serves requests only from connected VPCs. Public load balancers serve requests from the Internet.

**Public**

**Load balancer subnets**

Subnet	CIDR	Name
subnet-015157b...	172.31.80.0/20	us-east-1c
subnet-07fd112f...	172.31.32.0/20	us-east-1a
subnet-0b3c867...	172.31.0.0/20	us-east-1b
subnet-0d9faf25...	172.31.48.0/20	us-east-1e
subnet-0de5962...	172.31.64.0/20	us-east-1f
subnet-0f61af81...	172.31.16.0/20	us-east-1d

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**Load Balancer Type**

**Application load balancer**  
Application layer load balancer—routing HTTP and HTTPS traffic based on protocol, port, and route to environment processes.

**Classic load balancer**  
Previous generation → HTTP, HTTPS, and TCP

**Network load balancer**  
Ultra-high performance and static IP addresses for your application.

**Dedicated**  
Use a load balancer that Elastic Beanstalk creates exclusively for this environment.

**Shared**  
Use a load balancer that someone in your account created. It can be shared among multiple Elastic Beanstalk environments.

**Listeners**  
You can specify listeners for your load balancer. Each listener routes incoming client traffic on a specified port using a specified protocol to your environment processes. By default, we've configured your load balancer with a standard web server on port 80.

Listener Port	Listener Protocol	SSL certificate	Default process	Enabled
80	HTTP	—	default	<input checked="" type="checkbox"/>

Actions Add listener CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

**Processes**

For each environment process, you can specify the protocol and port that the load balancer uses to route requests to the process. You can also specify how the load balancer performs process health checks.

Name	Port	Protocol	HTTP code	Health check path	Stickiness
default	80	HTTP	/	Disabled	

**Rules**

Your load balancer routes requests to environment processes based on rules. Rules are evaluated by priority in ascending numerical order. Elastic Beanstalk configures a default rule for each listener. Each default rule routes all traffic to the default process associated with each listener, and has the last priority among all rules of that listener. If a request doesn't match the conditions for any other rule, a default rule routes the request to the listener's default process.

Name	Listener ports	Priority	Host headers	Path patterns	Processes

No additional listener rules are currently configured.  
Click [Add rule](#) to add a listener rule.

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**Log files access**

Configure Elastic Load Balancing to capture logs with detailed information about requests sent to your Load Balancer. Logs are stored in Amazon S3.

**Store logs**  
Standard Amazon S3 charges apply.

Enabled

S3 Bucket  
S3 Bucket

Prefix  
Standard Amazon S3 charges apply.

Cancel Skip to review Previous Next

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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 updates, monitoring, and logging - *optional* [Info](#)

**Monitoring [Info](#)**

**Health reporting**

Enhanced health reporting provides free real-time application and operating system monitoring of the instances and other resources in your environment. The [EnvironmentHealth](#) custom metric is provided free with enhanced health reporting. Additional charges apply for each custom metric. For more information, see [Amazon CloudWatch Pricing](#).

Basic  
 Enhanced

CloudWatch Custom Metrics - Instance  
[Choose metrics](#)  
InstanceHealth [X](#)

CloudWatch Custom Metrics - Environment  
[Choose metrics](#)  
ApplicationLatencyP10 [X](#)

**Health monitoring rule customization**

Configure the HTTP application and load balancer status codes included in determining your environment's health. [Learn more](#)

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**ApplicationLatencyP10**

**Health monitoring rule customization**

Configure the HTTP application and load balancer status codes included in determining your environment's health. [Learn more](#)

Ignore application 4xx  
 Activated

Ignore load balancer 4xx  
 Activated

**Health event streaming to CloudWatch Logs**

Configure Elastic Beanstalk to stream environment health events to CloudWatch Logs. You can set the retention up to a maximum of ten years and configure Elastic Beanstalk to delete the logs when you terminate your environment.

Log streaming  
 Activated (standard CloudWatch charges apply.)

Retention  
7

Lifecycle  
Keep logs after terminating environment

**Managed platform updates** [Info](#)

Activate managed platform updates to apply platform updates automatically during a weekly maintenance window that you choose. Your application stays available during the update process.

Managed updates  
 Activated

Weekly update window  
Tuesday at 07 : 58 UTC

Update level  
Minor and patch

Instance replacement  
If enabled, an instance replacement will be scheduled if no other updates are available.  
 Activated

**Email notifications** [Info](#)

Enter an email address to receive email notifications for important events from your environment. [Learn more](#)

Email  
user@example.com

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**Managed platform updates** [Info](#)

Activate managed platform updates to apply platform updates automatically during a weekly maintenance window that you choose. Your application stays available during the update process.

Managed updates  
 Activated

Weekly update window  
Tuesday at 07 : 58 UTC

Update level  
Minor and patch

Instance replacement  
If enabled, an instance replacement will be scheduled if no other updates are available.  
 Activated

**Email notifications** [Info](#)

Enter an email address to receive email notifications for important events from your environment. [Learn more](#)

Email  
user@example.com

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**Rolling updates and deployments** [Info](#)

Choose how Amazon Elastic Beanstalk propagates source code changes and software configuration updates. [Learn more](#)

Deployment policy  
Rolling

Batch size type  
 Percentage  
 Fixed

Deployment batch size  
30

% instances at a time

Traffic Split  
%

% to new application versions

Traffic splitting evaluation time  
minutes

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**Configuration updates**

Changes to virtual machine settings and VPC configuration trigger rolling updates to replace the instances in your environment without downtime. [Learn more](#)

**Rolling update type**

Deactivated

**Batch Size**

The maximum number of instances to replace in each phase of the update.

instances

**Minimum capacity**

The minimum number of instances to keep in service at all times.

instances

**Pause Time**

Pause the update for up to an hour between each batch.

00:00:00

**Deployment preferences**

Customize health check requirements and deployment timeouts.

**Ignore health check**

Don't fail deployments due to health check failures.

False

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**Batch Size**

The maximum number of instances to replace in each phase of the update.

instances

**Minimum capacity**

The minimum number of instances to keep in service at all times.

instances

**Pause Time**

Pause the update for up to an hour between each batch.

00:00:00

**Deployment preferences**

Customize health check requirements and deployment timeouts.

**Ignore health check**

Don't fail deployments due to health check failures.

False

**Health threshold**

Lower the threshold for an instance in a batch to pass health checks during an update or deployment.

Ok

**Command timeout**

Change the amount of time in seconds that Amazon Elastic Beanstalk allows an instance to complete deployment commands.

600 seconds

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**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).

/

**Memory limit**

The amount of memory allocated to the PHP environment. This value is written to a .ini configuration file located in the /etc/php.d/ directory.

256M

**Zlib output compression**

Whether PHP should use compression for output. This value is written to a .ini configuration file located in the /etc/php.d/ directory.

Off

**Allow URL fopen**

Whether the PHP's file functions are allowed to retrieve data from remote locations, such as web servers or FTP servers. This value is written to a .ini configuration file located in the /etc/php.d/ directory.

Off

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**Max execution time**  
The maximum time a script is allowed to run before the environment terminates it. This helps prevent poorly written scripts from tying up the server.  
 seconds

**Amazon X-Ray**  
Amazon X-Ray is a service that collects data about the requests and responses that your application serves and receives. You can use the tools that X-Ray offers to view and filter the data that it provides to identify potential issues and optimization opportunities.

**X-Ray daemon**  
(service charges may apply.)  
 Activated

**S3 log storage**  
Configure the instances in your environment to upload rotated logs to Amazon S3. [Learn more](#)

**Rotate logs**  
(standard S3 charges apply.)  
 Activated

**Instance log streaming to CloudWatch logs**  
Configure the instances in your environment to stream logs to CloudWatch logs. You can set the retention to up to 10 years and configure Elastic Beanstalk to delete the logs when you terminate your environment. [Learn more](#)

**Log streaming**  
(standard CloudWatch charges apply.)  
 Activated

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**Rotate logs**  
(standard S3 charges apply.)  
 Activated

**Instance log streaming to CloudWatch logs**  
Configure the instances in your environment to stream logs to CloudWatch logs. You can set the retention to up to 10 years and configure Elastic Beanstalk to delete the logs when you terminate your environment. [Learn more](#)

**Log streaming**  
(standard CloudWatch charges apply.)  
 Activated

**Retention**

**Lifecycle**

**Environment properties**  
The following properties are passed in the application as environment properties. [Learn more](#)

No environment properties have been configured.

Add environment property Cancel Previous Next © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

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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

**Review** [Info](#)

**Step 1: Configure environment** [Edit](#)

**Environment information**

Environment tier Web server environment	Application name PhpProject
Environment name PhpProject-env	Application code index.zip
Platform arn:aws:elasticbeanstalk:us-east-1:platform/PHP 8.2 running on 64bit Amazon Linux 2023/4.0.5	

**Step 2: Configure service access** [Edit](#)

**Service access** [Info](#)  
Configure the service role and EC2 instance profile that Elastic Beanstalk uses to manage your environment. Choose an EC2 key pair to securely log in to your EC2 Instances.

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Screenshot of Step 2: Configure service access

Service access [Info](#)  
Configure the service role and EC2 instance profile that Elastic Beanstalk uses to manage your environment. Choose an EC2 key pair to securely log in to your EC2 instances.

Service role arn:aws:iam::045782546962:role/service-role/aws-elasticbeanstalk-service-role	EC2 key pair pavilion	EC2 instance profile BeanstalkRoleForProject
---	--------------------------	---

[Edit](#)

**Step 3: Set up networking, database, and tags**

[Edit](#)

**Networking, database, and tags [Info](#)**  
Configure VPC settings, and subnets for your environment's EC2 instances and load balancer. Set up an Amazon RDS database that's integrated with your environment.

**Network**

VPC vpc-01fd0d74ff1bd59054	Public IP address true	Instance subnets subnet-07fd112f4f7c34bd5, subnet-015157b5632abb67, subnet-0d9faf25f74feb6c3, subnet-0de5962607c74868e, subnet-0b3c867bcf18df7de, subnet-0f61af81ddcbe01dc
-------------------------------	---------------------------	---

**Database**

Database availability true	Has coupled database true	Database deletion policy Delete
Database engine mysql	Database engine version 8.0.33	Database instance class db.t2.micro
Database password *****	Database snapshot manual1000pm	Database storage 20

[Edit](#)

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Screenshot of Step 3: Set up networking, database, and tags

**Networking, database, and tags [Info](#)**  
Configure VPC settings, and subnets for your environment's EC2 instances and load balancer. Set up an Amazon RDS database that's integrated with your environment.

**Network**

VPC vpc-01fd0d74ff1bd59054	Public IP address true	Instance subnets subnet-07fd112f4f7c34bd5, subnet-015157b5632abb67, subnet-0d9faf25f74feb6c3, subnet-0de5962607c74868e, subnet-0b3c867bcf18df7de, subnet-0f61af81ddcbe01dc
-------------------------------	---------------------------	---

**Database**

Database availability true	Has coupled database true	Database deletion policy Delete
Database engine mysql	Database engine version 8.0.33	Database instance class db.t2.micro
Database password *****	Database snapshot manual1000pm	Database storage 20

[Edit](#)

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Screenshot of Step 3: Set up networking, database, and tags

**Database**

Database availability true	Has coupled database true	Database deletion policy Delete
Database engine mysql	Database engine version 8.0.33	Database instance class db.t2.micro
Database password *****	Database snapshot manual1000pm	Database storage 20

**Database subnets**

subnet-07fd112f4f7c34bd5, subnet-015157b5632abb67, subnet-0d9faf25f74feb6c3, subnet-0de5962607c74868e, subnet-0b3c867bcf18df7de, subnet-0f61af81ddcbe01dc	Database username admin
---	----------------------------

**Tags**

Key	Value
No tags	
There are no tags defined	

[Edit](#)

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**Step 4: Configure instance traffic and scaling**

**Instance traffic and scaling** Info  
Customize the capacity and scaling for your environment's instances. Select security groups to control instance traffic. Configure the software that runs on your environment's instances by setting platform-specific options.

Instances		
IMDSv1	EC2 Security Groups	
Deactivated	sg-0056599c6afebabfc, sg-090cd3a7fdf8473c6, sg-0c318d57ba9974899, sg-043cdcc5172b9dc1	
Capacity		
Environment type	Min instances	Max instances
Load balanced	2	4
Fleet composition	On-demand base	On-demand above base
On-Demand instances	0	70
Capacity rebalancing	Scaling cooldown	Processor type
Deactivated	360	x86_64

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**Capacity**

Environment type	Min instances	Max instances
Load balanced	2	4
Fleet composition	On-demand base	On-demand above base
On-Demand instances	0	70
Capacity rebalancing	Scaling cooldown	Processor type
Deactivated	360	x86_64
Instance types	AMI ID	Availability Zones
t2.micro	ami-072b7b1fdb1ab1acc	Any
Metric	Statistic	Unit
NetworkOut	Average	Bytes
Period	Breach duration	Upper threshold
5	5	6000000
Scale up increment	Lower threshold	Scale down increment
1	2000000	-1
Load balancer		
Load balancer visibility	Load balancer subnets	Load balancer type
public	subnet-015157b5632aab67, subnet-	application

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**Step 5: Configure updates, monitoring, and logging**

**Updates, monitoring, and logging** Info  
Define when and how Elastic Beanstalk deploys changes to your environment. Manage your application's monitoring and logging settings, instances, and other environment resources.

Monitoring		
System enhanced	Cloudwatch custom metrics - instance	Cloudwatch custom metrics - environment
Log streaming Deactivated	Retention 7	Lifecycle false
Updates		
Managed updates Activated	Deployment batch size 30	Deployment batch size type Percentage
Command timeout 600	Deployment policy Rolling	Health threshold Ok

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Managed updates	Deployment batch size	Deployment batch size type
Activated	30	Percentage
Command timeout	Deployment policy	Health threshold
600	Rolling	Ok
Ignore health check	Instance replacement	
false	false	
Platform software		
Lifecycle	Log streaming	Allow URL fopen
false	Deactivated	On
Display errors	Document root	Max execution time
Off	-	60
Memory limit	Zlib output compression	Proxy server
256M	Off	nginx
Logs retention	Rotate logs	Update level
7	Deactivated	minor
X-Ray enabled		
Deactivated		
Environment properties		

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Lifecycle	Log streaming	Allow URL fopen
false	Deactivated	On
Display errors	Document root	Max execution time
Off	-	60
Memory limit	Zlib output compression	Proxy server
256M	Off	nginx
Logs retention	Rotate logs	Update level
7	Deactivated	minor
X-Ray enabled		
Deactivated		
Environment properties		

Key ▲ | Value  
No environment properties  
There are no environment properties defined

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Elastic Beanstalk Applications Environments Change history

Application: PhpProject Application versions Saved configurations

Environment: PhpProject-env Go to environment Configuration Events Health Logs Monitoring Alarms Managed updates Tags

Elastic Beanstalk is launching your environment. This will take a few minutes.

Elastic Beanstalk > Environments > PhpProject-env

PhpProject-env Info

Actions Upload and deploy

Environment overview

Health	Environment ID
Unknown	e-ph3mmfb9d
Domain	Application name
-	PhpProject

Platform

Platform
PHP 8.2 running on 64bit Amazon Linux 2023/4.0.5
Running version
-
Platform state
Supported

Events Health Logs Monitoring Alarms Managed updates Tags

Events (2) Info

Filter events by text, property or value

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Environment overview

Health	Environment ID
Ok	e-ph3mmfb9d
Domain	Application name
PhpProject-env.eba-fzrbragg.us-east-1.elasticbeanstalk.com	PhpProject

Platform

Platform
PHP 8.2 running on 64bit Amazon Linux 2023/4.0.5
Running version
1
Platform state
Supported

Events | Health | Logs | Monitoring | Alarms | Managed updates | Tags

Events (25) Info

Filter events by text, property or value

Time | Time | Details

https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#

## Step-7: Copy the domain name and paste it another tab

Users:

ID	Username	Email
1	sai	sai@gmail.com
2	rohit	rohit@gmail.com
3	chinta	chinta@gmail.com

## Step-8: For testing the code perform the following instructions

- Insert 4 more records into the db table
- Refresh the php application to view the updated data

The screenshot shows the SQLyog Community interface. On the left, the database structure for 'test' is displayed, including the 'users' table. In the center, a query window shows the result of the SQL command 'SELECT VERSION();'. Below it, the 'Table Data' tab displays the contents of the 'users' table:

ID	username	email
1	sai	sai@gmail.com
2	rohit	rohit@gmail.com
3	chinta	chinta@gmail.com
4	a	a@gmail.com
5	aa	aa@gmail.com
6	aaa	aaa@gmail.com
7	aaaa	aaaa@gmail.com
*	(NULL)	(NULL)

The screenshot shows a web browser displaying the 'Users' table from the previous screenshot. The table has columns: ID, Username, and Email. The data matches the entries in the SQLyog interface.

ID	Username	Email
1	sai	sai@gmail.com
2	rohit	rohit@gmail.com
3	chinta	chinta@gmail.com
4	a	a@gmail.com
5	aa	aa@gmail.com
6	aaa	aaa@gmail.com
7	aaaa	aaaa@gmail.com

The screenshot shows the AWS EC2 Instances page. The left sidebar includes options like EC2 Dashboard, EC2 Global View, Events, Console-to-Code Preview, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (AMIs, AMI Catalog), Elastic Block Store (Volumes), and CloudShell/Feedback. The main content area displays 'Instances (2) Info' with a table showing two instances:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
PhpProject-env	i-0440804ca2f47bf32	Running	t2.micro	2/2 checks passed	View alarms	us-east-1e
PhpProject-env	i-0986d39b9c822a671	Running	t2.micro	2/2 checks passed	View alarms	us-east-1b

A modal window titled 'Select an instance' is open at the bottom.

## Step-9: Create the rds db and perform blue/green deployment

- Blue deployment has mysql version 8.0.33
- Green deployment has mysql version 8.0.35

The screenshot shows the AWS RDS Databases page. The left sidebar includes options like Dashboard, Databases (selected), Query Editor, Performance insights, Snapshots, Exports in Amazon S3, Automated backups, Reserved instances, Subnet groups, Parameter groups, Option groups, Custom engine versions, Zero-ETL integrations (New), Events, and Event subscriptions. The main content area displays 'Databases (2)' with a table showing two databases:

DB identifier	Status	Role
awseb-e-ph3mmfb9d-stack-awsebrsdatabase-fzfbmqmmzuj	Available	Ins
myphpproject	Available	Ins

A context menu is open over the 'myphpproject' database, listing options: Quick Actions - New, Convert to Multi-AZ deployment, Stop temporarily, Reboot, Delete, Set up EC2 connection, Set up Lambda connection, Create read replica, Create Aurora read replica, Create Blue/Green Deployment - new (highlighted), Promote, Take snapshot, Restore to point in time, Migrate snapshot, Create zero-ETL integration, Create RDS Proxy, and Create ElastiCache cluster - new.

**Create Blue/Green Deployment: myphpproject** [Info](#)

Create a Blue/Green Deployment that clones the resources of your current production environment (blue) to a staging environment (green). You can modify the green environment without affecting the blue environment. When you're ready, switch to the green environment to make it the current production environment.

**Settings**

**Identifiers** [Info](#)

**Blue database identifier** [Blue](#)  
Selected database identifiers in the current production environment. The databases in the green environment are generated automatically when the Blue/Green Deployment is created.  
**myphpproject**

**Blue/Green Deployment identifier**  
Type a name for your Blue/Green Deployment. The name must be unique across all Blue/Green Deployments owned by your AWS account in the current AWS Region.  
**bluegreenPHDDeployment**  
The Blue/Green Deployment identifier is case-insensitive, but is stored as all lowercase (as in "mybgdeployment"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

**Blue/Green Deployment settings** [Info](#)  
Choose the engine version for green databases.  
**MySQL 8.0.35 - recommended**

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**Blue/Green Deployment settings** [Info](#)  
Choose the engine version for green databases.  
**MySQL 8.0.35 - recommended**  
Choose the DB parameter group for green databases.  
**default.mysql8.0**

**RDS Optimized Writes** [Info](#)  
Amazon RDS Optimized Writes provide up to 2x improvement in write transaction throughput.

**Blue DB instance class** [Blue](#)  
**db.t2.micro**  
 **Enable Optimized Writes on green database**

**Storage**

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**Estimated monthly costs for green database**  
A Blue/Green Deployment creates new databases in the green environment. The costs for the databases on the green environment are similar to the costs for the databases in the blue environment. These costs include the current standard pricing for the DB instances, storage, I/Os, in addition to enabled features such as a Multi-AZ deployment, backups, and Amazon RDS Performance Insights. This estimate shows the costs for the green databases only.

DB instances	-
db.t2.micro (1 primary)	12.41 USD
Storage	2.30 USD
<b>Total</b>	14.71 USD

Estimate your monthly cost for the DB instance using the [Amazon RDS for MySQL Pricing](#).

This billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, I/Os (if applicable), or data transfer.

**Ensure that IAM policies are applied before switchover**  
IAM roles aren't copied over from the blue environment to the green environment. Make sure that your IAM policies are appropriately applied to the green environment before you switch over the blue/green deployment.  
[Learn more](#)

**Create staging environment**

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RDS is creating Blue/Green Deployment bluegreenphpdeployment and green database  
Preparing to create Blue/Green Deployment

View details X

Databases (3)

DB identifier Status Role Engine Region & AZ

DB identifier	Status	Role	Engine	Region & AZ
awseb-e-ph3mmfb9d-stack-awsebrdsdatabase-fzfbmqmmzuj	Available	Instance	MySQL Community	us-east-1f
myphpproject <span style="color: blue;">Blue</span>	Available	Primary	MySQL Community	us-east-1f
bluegreenphpdeployment	Provisioning	Blue/Green Deployment	-	-

Events Event subscriptions CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

RDS is creating Blue/Green Deployment bluegreenphpdeployment and green database  
Preparing to create Blue/Green Deployment

View details X

Databases (4)

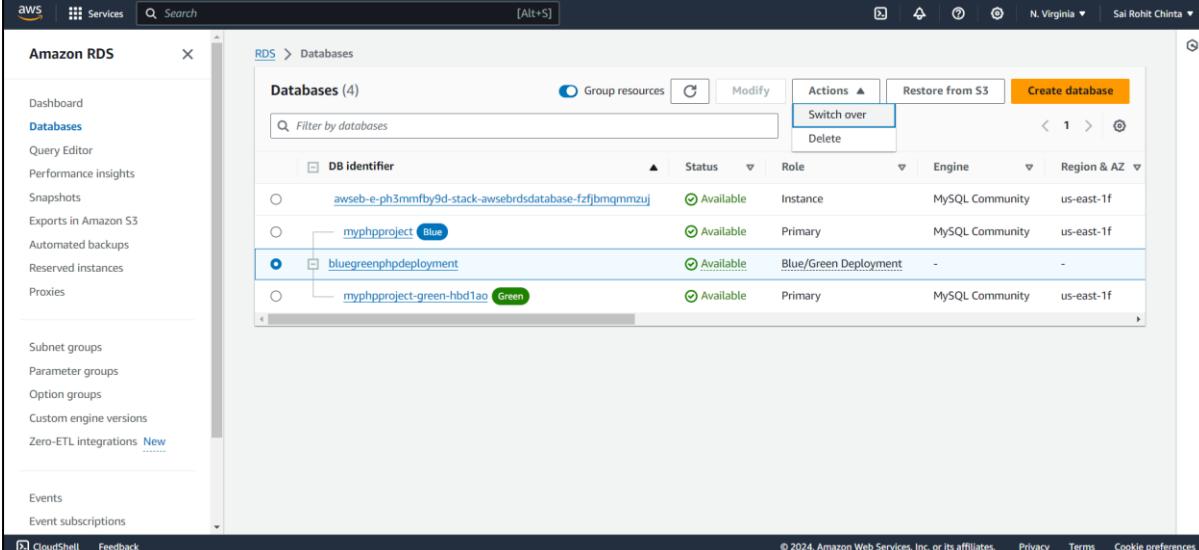
DB identifier Status Role Engine Region & AZ

DB identifier	Status	Role	Engine	Region & AZ
awseb-e-ph3mmfb9d-stack-awsebrdsdatabase-fzfbmqmmzuj	Available	Instance	MySQL Community	us-east-1f
myphpproject <span style="color: blue;">Blue</span>	Available	Primary	MySQL Community	us-east-1f
bluegreenphpdeployment	Available	Blue/Green Deployment	-	-
myphpproject-green-hbd1ao <span style="color: green;">Green</span>	Available	Primary	MySQL Community	us-east-1f

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## Step-10: Now perform switch over option so that

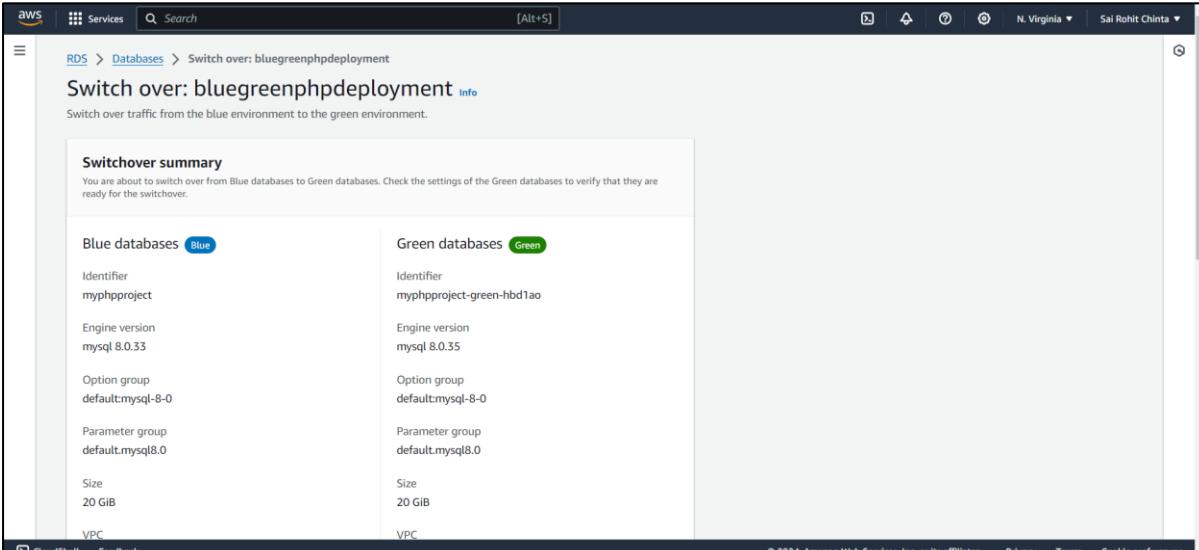
- Blue deployment has mysql version 8.0.35
- Green deployment has mysql version 8.0.35



The screenshot shows the AWS RDS console under the 'Databases' section. There are four databases listed:

DB identifier	Status	Role	Engine	Region & AZ
awsedb-e-ph3mmfb9d-stack-awsebrdsdatabase-fzfbmgmmzuj	Available	Instance	MySQL Community	us-east-1f
myphpproject <span style="color: blue;">Blue</span>	Available	Primary	MySQL Community	us-east-1f
bluegreenphpdeployment	Available	Blue/Green Deployment	-	-
myphpproject-green-hbd1ao <span style="color: green;">Green</span>	Available	Primary	MySQL Community	us-east-1f

The 'Actions' menu at the top right is open, showing options: Group resources, Modify, Actions (with 'Switch over' highlighted), Restore from S3, Create database, and Delete.



The screenshot shows the 'Switch over: bluegreenphpdeployment' configuration page. It displays a summary of the databases involved in the switchover:

Blue databases <span style="color: blue;">Blue</span>	Green databases <span style="color: green;">Green</span>
Identifier myphpproject	Identifier myphpproject-green-hbd1ao
Engine version mysql 8.0.33	Engine version mysql 8.0.35
Option group default:mysql-8-0	Option group default:mysql-8-0
Parameter group default.mysql8.0	Parameter group default.mysql8.0
Size 20 GiB	Size 20 GiB
VPC	VPC

	Identifier	Identifier
myphpproject	myphpproject-green-hbd1ao	
Engine version	mysql 8.0.35	Engine version
Option group	default:mysql-8-0	Option group
Parameter group	default.mysql8.0	Parameter group
Size	20 GiB	Size
VPC	sg-0099489c2823f8553 ,sg-0c43cdcc5172b9dc1 ,sg-090cd5a7fdf8473c6 ,sg-0c318d57ba9974899	VPC
Multi-AZ	us-east-1f	Multi-AZ
Storage type	General Purpose SSD (gp2)	Storage type
Storage file system configuration	<a href="#">Info</a>	Storage file system configuration
Current	Current	Current

Storage file system configuration	<a href="#">Info</a>	Storage file system configuration	<a href="#">Info</a>
Current	Current	Current	Current

**Timeout setting** [Info](#)  
The time limit for the switchover. If the switchover takes longer than the specified duration, then the switchover doesn't complete, and no changes are made to the environments. The timeout range is from 30 seconds to 1 hour.

Duration	Unit of time
5	minutes

**Pre-switchover considerations**  
Consider the following prior to switchover.

- Appropriately apply IAM policies  
IAM roles aren't copied over from the blue environment to the green environment. Make sure that your IAM policies are appropriately applied to the green environment before you switch over the blue/green deployment. [Learn more](#)
- Reduce costs by deleting old blue databases after switchover  
We recommend that you delete the old production environment myphpproject after the switchover completes if you no longer need it. You're billed for old instances according to the standard pricing model for DB instances. [Learn more](#)

[Cancel](#) [Switch over](#)

**Amazon RDS**

RDS is switching over production traffic from blue database myphpproject to green database myphpproject-green-hbd1ao  
RDS is preparing to switch over.

[RDS](#) > Databases

**Databases (4)**

DB identifier	Status	Role	Engine	Region & AZ
<a href="#">awseb-e-ph3mmfb9d-stack-awsebrdsdatabase-fzfbjbmqqmzuj</a>	Available	Instance	MySQL Community	us-east-1f
<a href="#">myphpproject</a> <span style="color: blue;">Blue</span>	Available	Primary	MySQL Community	us-east-1f
<a href="#">bluegreenphpdeployment</a>	Switching over	Blue/Green Deployment	-	-
<a href="#">myphpproject-green-hbd1ao</a> <span style="color: green;">Green</span>	Available	Primary	MySQL Community	us-east-1f

The screenshot shows the AWS RDS console under the 'Databases' section. A green banner at the top indicates that production traffic has been successfully switched over from blue databases to green databases. Below the banner, a table lists four databases:

DB identifier	Status	Role	Engine	Region
awsedb-e-ph3mmfb9d-stack-awsebrdsdatabase-fzfbmgmmzuj	Available	Instance	MySQL Community	us-east-1
myphpproject-old1 (Old Blue)	Available	Primary	MySQL Community	us-east-1
bluegreenphpdeployment	Switchover complete	Blue/Green Deployment	-	-
myphpproject (New Blue)	Available	Primary	MySQL Community	us-east-1

### Step-11: After the switch over is completed, perform the following operations

- Open the php application to view the data which has 7 records
- Update the db table with 3 more records
- Check the version of mysql db also
- Now again the php application to view the data which has 10 records

The screenshot shows a web browser window displaying a table titled 'Users'. The table has columns for 'ID', 'Username', and 'Email'. The data is as follows:

ID	Username	Email
1	sai	sai@gmail.com
2	rohit	rohit@gmail.com
3	chinta	chinta@gmail.com
4	a	a@gmail.com
5	aa	aa@gmail.com
6	aaa	aaa@gmail.com
7	aaaa	aaaa@gmail.com

SQLyog Community 64 - [phpproject/test - admin@myphpproject.cznehspwjd5.us-east-1.rds.amazonaws.com\*]

File Edit Favorites Database Table Others Tools Powertools Transactions Window Help

Filter (Ctrl+Shift+B) test

admin@myphpproject.cznehspwjd5.us-east-1.rds.amazonaws.com

information\_schema

performance\_schema

sys

test

Tables

users

Views

Stored Procs

Functions

Triggers

Events

Search across all databases without writing any queries : Reason #70 to upgrade

Query 1 users Query 2 +

1 SELECT VERSION()

1 Result 2 Profiler 3 Messages 4 Table Data 5 Info

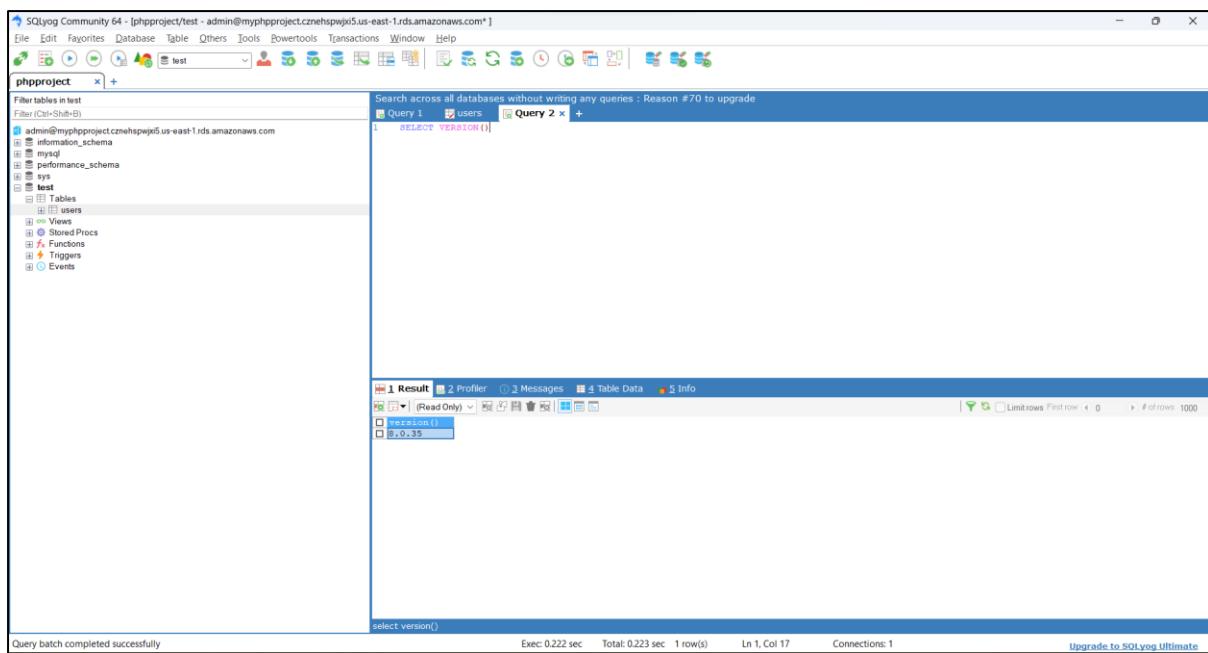
(Read Only) Limit rows First row < 0 # of rows 1000

version()

0.0.35

select version()

Query batch completed successfully Exec: 0.222 sec Total: 0.223 sec 1 row(s) Ln 1, Col 17 Connections: 1 Upgrade to SQLyog Ultimate



SQLyog Community 64 - [connect1/test - admin@myphpproject.cznehspwjd5.us-east-1.rds.amazonaws.com\*]

File Edit Favorites Database Table Others Tools Powertools Transactions Window Help

Filter (Ctrl+Shift+B) test

admin@myphpproject.cznehspwjd5.us-east-1.rds.amazonaws.com

information\_schema

mysql

performance\_schema

sys

test

Tables

users

Views

Stored Procs

Functions

Triggers

Events

Reverse Engineer your database schema using Visual Schema Designer : Reason #7 to upgrade

Query 1 users Query 2 +

1 SELECT VERSION()

1 Result 2 Profiler 3 Messages 4 Table Data 5 Info

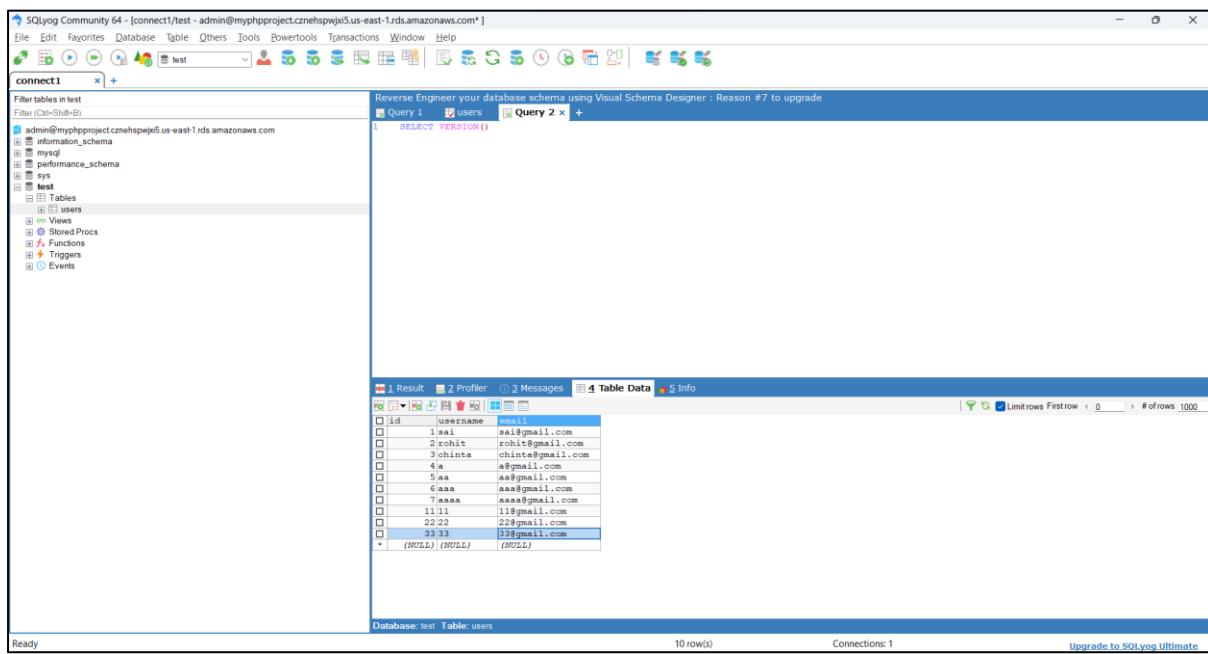
(Read Only) Limit rows First row < 0 # of rows 1000

ID	username	email
1	sai	sai@gmail.com
2	rohit	rohit@gmail.com
3	chintu	chintu@gmail.com
4	a	a@gmail.com
5	aa	aa@gmail.com
6	aaa	aaa@gmail.com
7	aaaa	aaaa@gmail.com
11	11	11@gmail.com
22	22	22@gmail.com
33	33	33@gmail.com
	(NULL)	(NULL)

Database: test Table: users

10 rows(s) Connections: 1 Upgrade to SQLyog Ultimate

Ready



A screenshot of a web browser window titled "Not secure | phpproject-env.eba-fjxwif4q.us-east-1.elasticbeanstalk.com". The browser has several tabs open, including YouTube, AniWave - Watch A..., ChatGPT, Inbox (4) - sairohitc..., Documents, AWS, and GitHub. The main content area displays a table titled "Users:" with the following data:

ID	Username	Email
1	sai	sai@gmail.com
2	rohit	rohit@gmail.com
3	chinta	chinta@gmail.com
4	a	a@gmail.com
5	aa	aa@gmail.com
6	aaa	aaa@gmail.com
7	aaaa	aaaa@gmail.com
11	11	11@gmail.com
22	22	22@gmail.com
33	33	33@gmail.com