Que🡪

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

a)So first we need an ec2 instance on which we can run over website.

We have already shared code of php which we are going to use.

First create Ec2 instance.

Click on launch instance.

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We have given name of our ec2 instance and select ubuntu as os for ami.

Select instance type as micro.

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Created one key pair.

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Let’s create one security group.

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We will allow all traffic on http here.

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Also add the ssh rule with http.

After that launch instance.

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Now connect to our instance.

Now first thing is to update our instance.

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Now to run our web application we need a server so we are going to install apache server.

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Now we can see our apache server running

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By default, Apache web server is instructed to listen for incoming connection and bind on port 80. If you opt for the TLS configuration, the server will listen for secure connections on port 443.

So we have configure our http already so it will listen.

Lets try to open public ip of instance on web page.

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We can see apache server healthy and running.

Also we can see the file path to replace for our website.

/var/www/html/index.html.

Let’s go to this path and replace it with our php code.

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First remove file using rm index.html

Than use nano index.php and copy paste our code.

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Now if you refresh the page

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We can see our web page loading with some errors , why?

Because it is not able to read php , so we need to install php compiler into our instance.

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Now to connect php with mysql we need other client like maria db.

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Now restart apache server using command

sudo systemctl restart apache2.service

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Now refresh browser.

Error gone only connection left.

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Now let’s create a rds instance.

Click on create database.

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Select mysql.

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Let’s use free tier for know.

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We have create a user with name intel and password intel12345.

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Choose our security group

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Give intel name to our database . left other setting as it is.

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Create database.

To connect Rds with our Ec2 instance we have to edit inbound rules for security group to get a successful connection.

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We have added mysql/aurora in inbound rules.

Now try to connect ec2 instance with our rds using command.

mysql -h capstoneassignment.clg0ikwoaws0.ca-central-1.rds.amazonaws.com -u intel -p

here -h is url of our database which you can find here.

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Now we have connected to our database.

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Now create a table in database with name data and two properties firstname and email.

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We have created and inserted one value into the table . now edit our index.php

A screen shot of a computer program

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Change severname / password whatever you have set and save it.

Now you can see no error in web page of connection.

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Now try to submit some value.

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After submitting the button go into your data base and see all entries in table.

We can see new values.

Now our ec2 part is done now the left one is auto scaling.

So first let’s create image of our ec2 instance which we are going to use in launch template for our auto scaling group.

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Let’s create image

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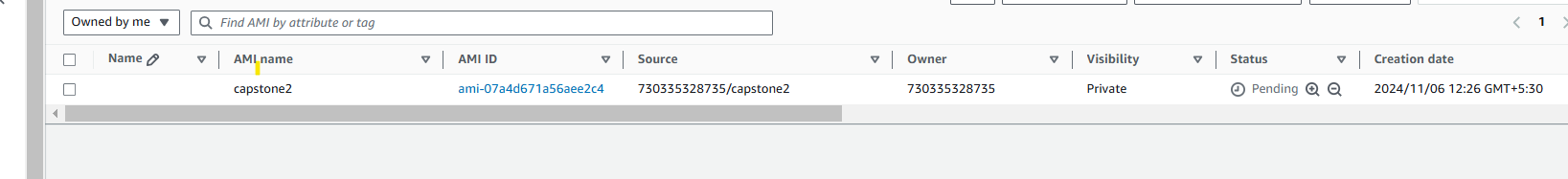
After successful creation of image delete your instance.

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Now our ami is available.

We have changed the name to capstoneproject as per our assignment.



Now lets create our beanstalk environment.

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Now lets create.

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We have give name as dev environment.

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Lets upload the file which we have edited.

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Now select instance.

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Now chose roles for beanstalk and instance.

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Now choose vpc setting.

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Now rds database setting.

We are not connecting to the database from here as we have already created one which we will configure in environments.

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Lets set other properties as default.

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Lets select our security group which we have created for db instances also.

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Now configure Load Balancer.

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Now instance properties.

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Here we have select the ami id for the image we have created earlier.

Now we have configure autoscaling for cpu utilization.

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We have configured load balancer.

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Rest default and create environment.

Not forget to set environment properties which is used by our index.php to connect.

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Now we can see in events .

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What are the events getting triggered wait for it to be complete.

Don’t forget to select root volume as gp3.

After the creation you will able to see GREEN as health check🡪

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You can access your application using that domain url .

Just copy and paste.

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Try to insert a record.

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