Cloud Computing with AWS -project

Deploy a Highly Availabile Wordpress Application

I have spent a lot of time learning cloud computing on AWS, getting practical experience doing hands-on lab and also doing assignments throughout the module. Now it's time to put together all learning in our final project.

Prerequisites

1) **An AWS account** with privileges to create IAM roles, AWS VPCs, EC2 instances, and RDS databases.
2) The next is **Access to the AWS console** with Administrator permission.

Problem Statement:

I will create a highly available (HA), scalable and fault-tolerant deployment of the WordPress application. You will deploy the WordPress application in such a way that the application server, load balancer and database will scale independently of one another. You will also deploy the application's components like the webserver and database into two availability zones to distribute it and guard against failure of the anyone availability zone. The WordPress application will be deployed in a stateless fashion so that we can add or remove web application servers in response to the requests flowing into the system.

Project details

Create a virtual private network(vpc)

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Create two subnets

- Public subnet
- Private subnet

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Set up the two route tables. Give internet access to public subnet and internet access is absent in private subnets

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Set up security group

- Default vpc security group give permission: ssh, http, https
- Create Mysql_security_group

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Launch mysql instance in privately and give sg: Mysql_security_group

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Launch linux-2 instance

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Create a target group and add instance and register targets

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Create Application load balancer and add target group

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Create instance launch template or launch image

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Then create auto scaling using application load balancer, launch template and give group size and scaling policies

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Connect the ec2 instance with ssh and use the commands are:

#sudo -i

#yum install tree -y

#yum update -y

#yum install httpd php-mysql -y

#amazon-linux-extras install -y php7.3

#cd /var/www/html

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Go to google and search wordpress site copy the download link

#wget https://wordpress.org/latest.zip

#unzip latest.zip

#cd wordpress

#cp -r /var/www/html (or) cp -r /wordpress/* /var/www/html

#cd ..

#rm -rf latest.zip wordpress

#chmod -R 755 wp-content

#chown -R apache:apache wp-content

#systemctl start httpd

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Copy the publicIP in instances and paste in web browser, then check the wordpress site will be appeared

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Give the database access (database_name, user_name, password, endpoint) and wp-configuration will copy and go to the instance

#Create file with vim wp-config.php

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This is the final step go to site and give details in wordpress and create the account of the wordpress.