

AWS Bootcamp Graduation Project

Rania Hedrich
Cloud Engineer

Introduction

- Rania - 29
- Computers and programming since 12 yo
- Former Technology Evangelist for Kubernetes
- Computer Science Expert
- eSports Senior Referee
- skateboarding and archery





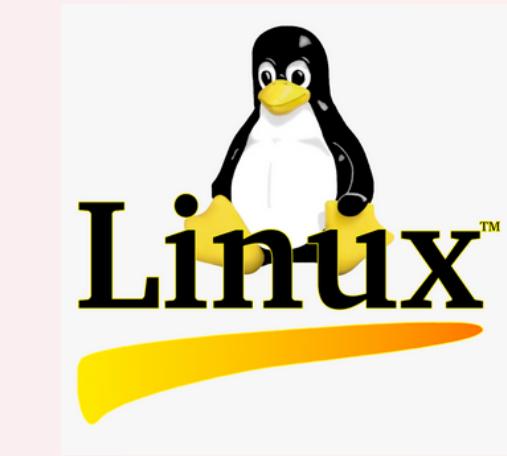
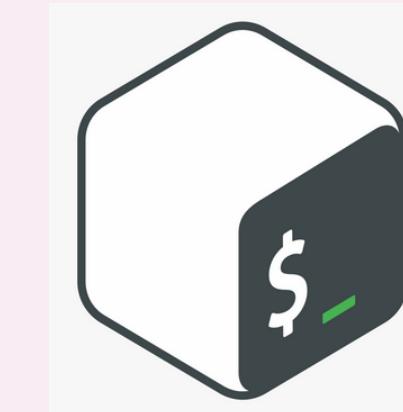
Baseline

Site

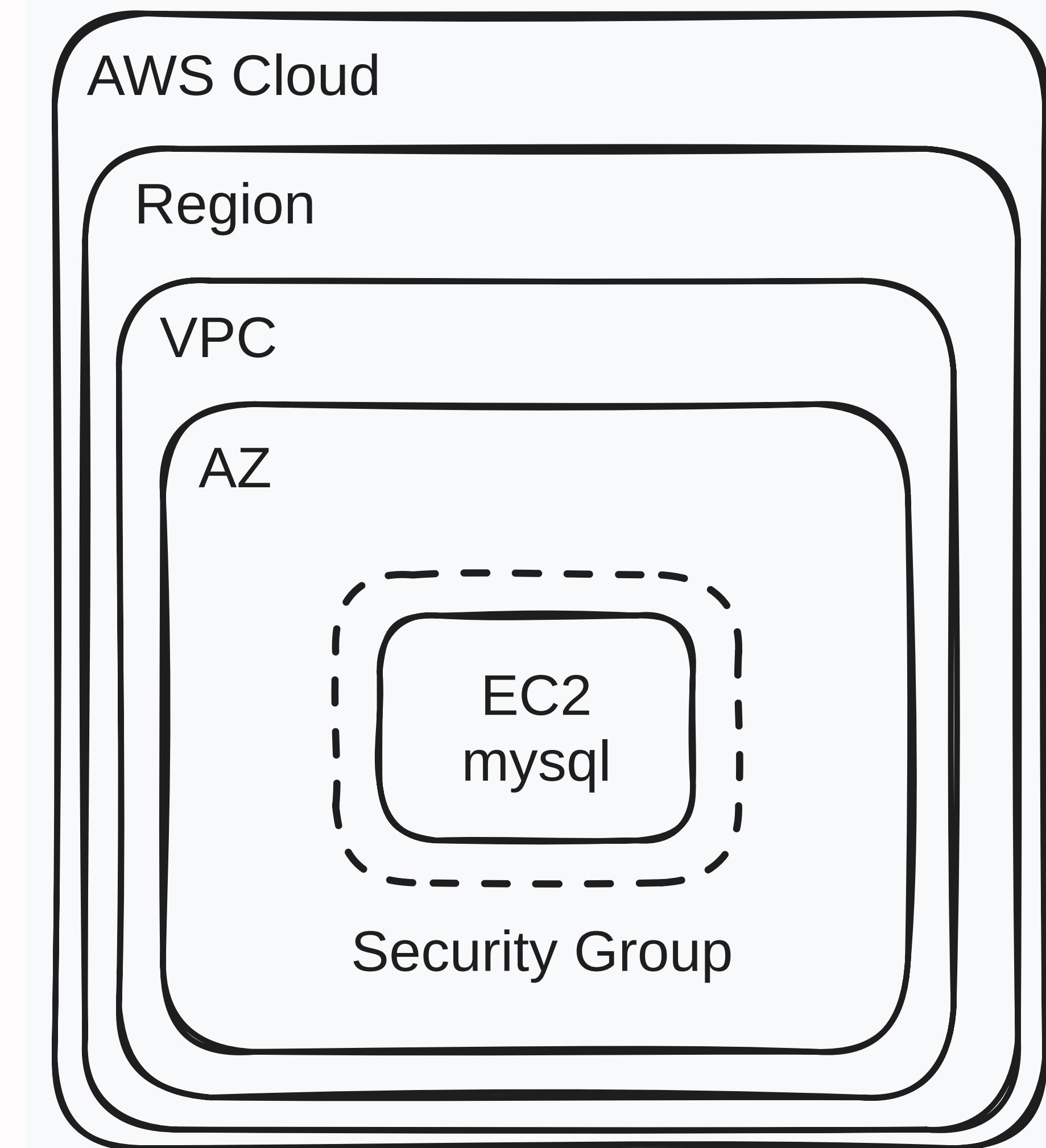
Troubleshoot

Enhance

Baseline Tools



Baseline Architecture



Building the website

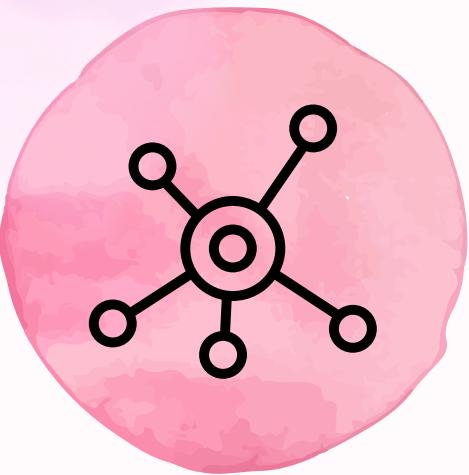


- Home
- Blog
- About
- Services
- eSports
- Contact

Discover TechRania's Journey into the Tech World



Troubleshoot



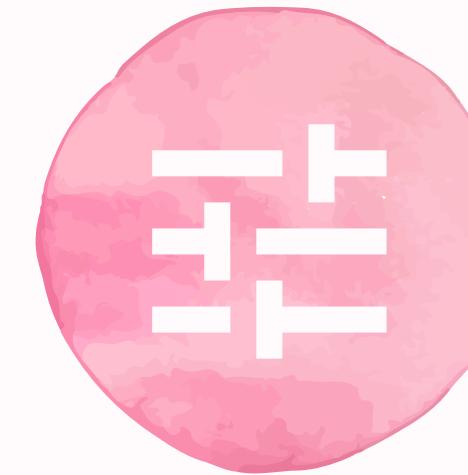
Expanding Architecture

- Adding more AWS Components
- Adjusting Terraform config
- Implement Scaling



User Data Script

- Adjust the User Data Script
- Add Wordpress CLI
- Move Database to RDS

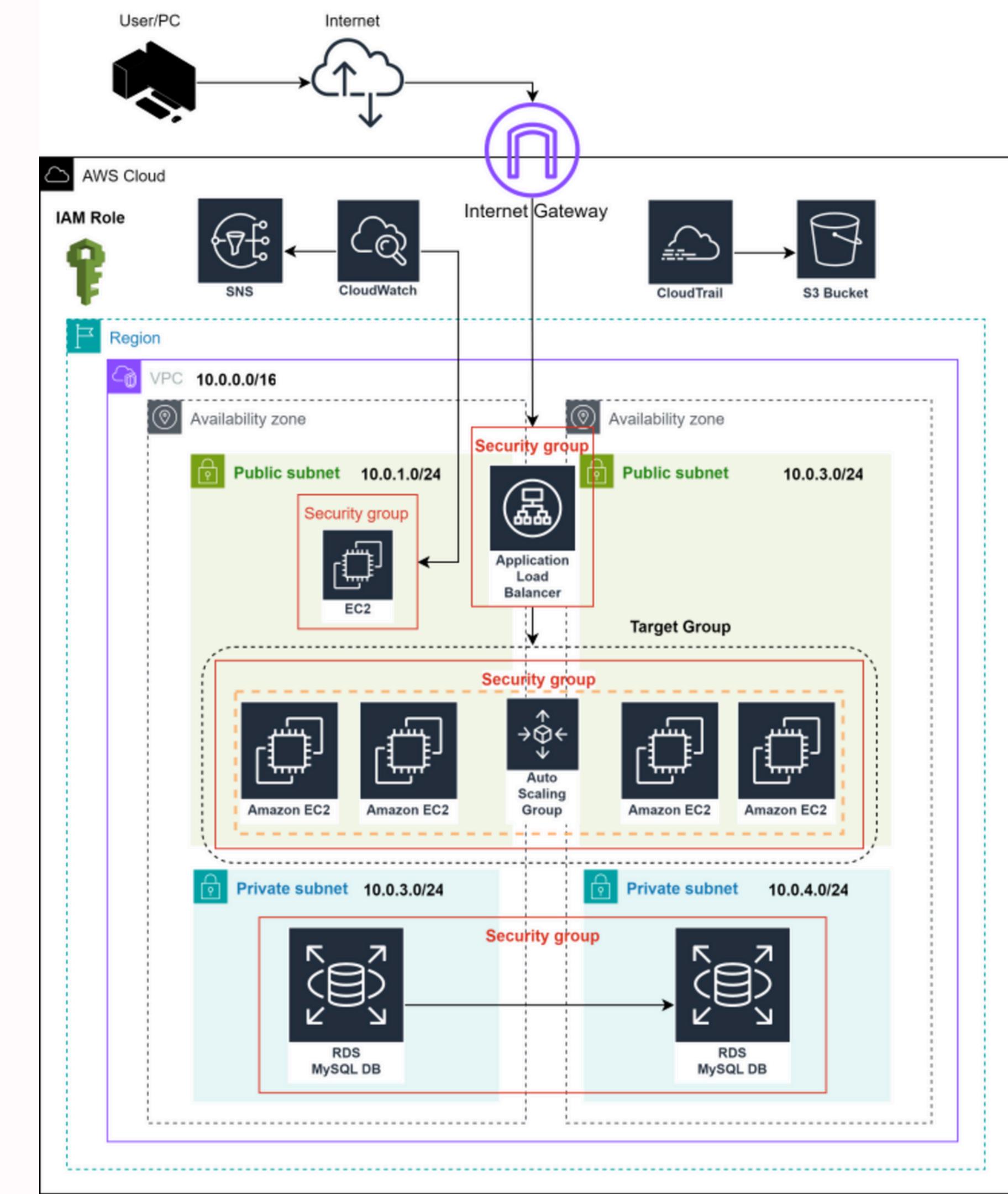


Fine Tuning

- Restore Website from Google Drive
- Adjust rollout to wait for dependencies

Enhanced Architecture Diagram

- Cloudwatch
- SNS
- Cloud Trail
- Scaling
- Load Balancing



User Data Script

- Install LAMP stack
- Install Wordpress + CLI
- Link Variables + Credentials
- Create Database
- Add plugins + Themes
- restore WP Backup

```
$ UserDataEC2.sh •  
$ UserDataEC2.sh  
25 # Retrieve RDS variables from Terraform output  
26 sudo touch DB_VAR.txt  
27 sudo chmod 777 DB_VAR.txt  
28 DBName=${db_name} >> DB_VAR.txt  
29 DBUser=${db_username} >> DB_VAR.txt  
30 DBRootPassword='rootpassword'  
31 DBPassword=${db_password} >> DB_VAR.txt  
32 db_endpoint=${db_endpoint} >> DB_VAR.txt  
33  
34 # Start Apache server and enable it on system startup  
35 sudo systemctl start httpd  
36 sudo systemctl enable httpd  
37  
38 # Download and install WordPress  
39 sudo wget http://wordpress.org/latest.tar.gz -P /var/www/html  
40 cd /var/www/html  
41 sudo tar -zxf latest.tar.gz  
42 sudo cp -rvf wordpress/* .  
43 sudo rm -R wordpress  
44 sudo rm latest.tar.gz  
45  
46 # Install WordPress Core  
47 wp core install --path=/var/www/html  
48  
49 # Making changes to the wp-config.php file, setting the DB name  
50 sudo cp ./wp-config-sample.php ./wp-config.php  
51 sudo sed -i "s/'database_name_here'/'$DBName'/g" wp-config.php  
52 sudo sed -i "s/'username_here'/'$DBUser'/g" wp-config.php  
53 sudo sed -i "s/'password_here'/'$DBPassword'/g" wp-config.php  
54 sudo sed -i "s/'localhost'/'$db_endpoint'/g" wp-config.php  
55  
56 # Grant permissions  
57 sudo usermod -a -G apache ec2-user  
58 sudo chown -R ec2-user:apache /var/www  
59 sudo chmod 2775 /var/www  
60 sudo find /var/www -type d -exec chmod 2775 {} \;  
61 sudo find /var/www -type f -exec chmod 0664 {} \;  
62  
63 # Create WordPress database  
64 #!/usr/bin/python  
65 import MySQLdb  
66  
67 # Connect to the MySQL database  
68 db = MySQLdb.connect(host="127.0.0.1", user="root",  
69                   passwd="rootpassword", db="wordpress")  
70  
71 # Create a cursor object  
72 cursor = db.cursor()  
73  
74 # Create the database  
75 cursor.execute("CREATE DATABASE IF NOT EXISTS wordpress")  
76  
77 # Close the connection  
78 db.close()
```

Challenges



Communicating Clearly

- Communicating Problems to colleagues and coaches
- writing AI prompts



Problem Solving

- Fixing Issues on a deadline
- how to apply google, gen Ai, Q
- adjusting IDE and documentation
- adding Backups in the future



learning new Technologies

- Learning Wordpress CLI
- Adapt to implement versioning
- Understanding Terraform config
- Amazon Web Services

Contact Me

- www.techrania.com
- (X) @Techrania
- contact@techrania.com
- github.com/tostares/terraform-website

Thank You!

Questions?

Rania Hedrich
Cloud Engineer