Capstone Project Weekly Progress Report

Project Title	Zene Cloud
Group Name	Group-I
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Reporting Week	27 May 2019 – 2 June 2019 (Week 3)
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1. Tasks Outlined in Previous Weekly Progress Report

- SSH (Secure Shell) in the Public and Private EC2 (Elastic Compute Cloud) instances.
- Create RDS (Relational Database Service) Security Group and RDS (Relational Database Service) Subnet group with Private Subnets.
- Launch RDS (Relational Database Service) instance in Multi - Availability Zone.
- Then we will try to access RDS (Relational Database Service) instance from EC2 (Elastic Compute Cloud).

2. Progress Made in Reporting Week

- We tried to SSH (Secure Shell) in the EC2 (Elastic Compute Cloud) instance that we have created using VPC (Virtual Private Cloud).
  - ✓ We SSH in Private EC2 (Elastic Compute Cloud) instance from (inside) Public EC2 (Elastic Compute Cloud) instance.
  - ✓ We updated the instance using Userdata / Bootstrap Script and also installed desired software.

- We then created a Security Group
  - ✓ We then configured the Inbound and Outbound rules for My SQL / Amazon Aurora on port number 3306 at custom subnet.
  - ✓ This is our Web Server Security Group, so whatever servers are there in Web Server Security Group only those system will be able to access our database.
- We then created RDS (Relational Database Service) instance
  - ✓ Then we choose My SQL as our database instance for Dev/Test purposes.
  - ✓ We then configured the Database instance class info as
    - db.t2micro – 1 vCPU, 1 GiB RAM
  - ✓ For Storage class we choose
    - General Purpose SSD (Solid State Drive)
  - ✓ We then filled the Database settings such as
    - DB instance Identifier info
    - Master username info
    - Master password info
  - ✓ Then we configured our advance settings
    - Network and Security
      - ➢ VPC (Virtual Private Cloud) info
      - ➢ Subnet Group Info
      - ➢ Public accessibility info
      - ➢ Availability zone info
      - ➢ VPC Security Groups
    - Encryption
    - Backup
    - Monitoring

3. Difficulties Encountered in Reporting Week

- There was an unexpected error occur, when ever we tried to SSH (Secure Shell) in our EC2 (Elastic Compute Cloud) instance it showed us “Connection Timed Out Error”, we tried to SSH (Secure Shell) from different systems and moreover different operation systems (both from Linux and Windows) but we were not able to resolve that, after searching from the web and experimenting different things we found the solution from **https://forums.aws.amazon.com/thread.jspa?threadID=264204**
  - ✓ Firstly, while creating security groups for EC2 (Elastic Compute Cloud) instance we need to open the port 22 for SSH (Secure Shell) on all the IP addresses and for the private EC2 (Elastic Compute Cloud) instance we need to open only on custom IP address.
  - ✓ Then we created an IAM (Identity and Access Management) role, which was set to the permissions of having all admin EC2 (Elastic Compute Cloud) privileges.

- ✓ It worked …!!

- We were not able to access Private EC2 (Elastic Compute Cloud) Instance from Public EC2 (Elastic Compute Cloud) Instance, we then overcome this problem by
  - ✓ Creating one more route table (other than main route table in which both the subnet address was associated), which we named as public and then we did subnet association of public subnet to the new route table, which by default made the main route table as private and it worked …!!

4. Tasks to Be Completed in Next Week

- Create new IAM (Identity and Access Management) Role and S3 (Simple Storage Service) bucket
- Assign IAM (Identity and Access Management) role to EC2 (Elastic Compute Cloud) instance and copy application date to S3 (Simple Storage Service) bucket
- Create Route53 hosted zones to map with domain
- Create AMI (Amazon Machine Image) for EC2 (Elastic Compute Cloud) Instance
- We will try to access Application with Route53