

**Task Description:**

As part of your application process, we would like you to complete a practical task that simulates a common scenario in a DevOps role involving multiple remote machines. Please follow the instructions below and submit your solution within the provided time frame.

**Scenario:**

You have been assigned to set up a private network for multiple remote machines that need to communicate with each other securely. Your task is to:

**Set Up a Private Network:**

1. Use AWS VPC (Virtual Private Cloud) to create a private network.
2. Ensure that the network is secure and isolated from the public internet.
3. Create subnets and configure routing tables as needed.
4. Provision Remote Machines:
5. Launch two EC2 instances within the VPC: One instance for a web application (e.g., a Node.js or Python Flask application).
6. One instance for a PostgreSQL database.
7. Ensure that the instances are in the same private subnet and can communicate with each other.

**Application and Database Configuration:**

1. Install and configure the web application on the first instance.
2. Install and configure PostgreSQL on the second instance.
3. Ensure the web application can connect to the PostgreSQL database.
4. Web application is routed by ALB and setup a dns for your application.

**Secure Communication:**

1. Implement security groups and network ACLs to allow only necessary traffic between the instances.
2. Set up a bastion host to allow secure SSH access to the instances from outside the VPC.

**Automate the Setup:**

1. Use Terraform to automate the setup of the VPC, subnets, security groups, and EC2 instances.
2. Provide a Terraform configuration file that can be used to recreate the entire setup.

**Documentation:**

1. Write clear and concise documentation on how to set up the private network, provision the remote machines, and configure the application and database.
2. Include any necessary configuration details and prerequisites.

**Submission:**

1. Provide a link to the GitHub repository containing your Terraform configuration files, application setup scripts, and documentation.
2. Ensure your repository is public