Terraform Setup Documentation

1. Install Terraform

- To install Terraform, we recommend using tfenv, a Terraform version manager available at [tfenv GitHub repository](#).
- Use the following commands to install and set up Terraform:
    - TFENV_ARCH=amd64 tfenv install 1.9.4
    - tfenv use 1.9.4

2. Create AWS User for Terraform

- In the AWS Management Console, create a new IAM user named terraform-access.
- Assign the AdministratorAccess policy to this user.
- Ensure that this user has **only programmatic access** and no AWS console access.
- Generate and download the **Access Key ID** and **Secret Access Key** for this user.

3. Setup AWS CLI

- Install the AWS CLI on a Debian-based system using the following commands:

    curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"
    unzip awscliv2.zip
    sudo ./aws/install

- Configure the AWS CLI using the following command:
    aws configure --profile terraform
    - When prompted, enter the **Access Key ID** and **Secret Access Key** you downloaded earlier.
    - Set the default region and output format according to your preferences.

4. Create S3 Bucket for Terraform Backend

- In the AWS Management Console, create an S3 bucket named terraform-backend-concentric-ai.
- This bucket will be used to store Terraform state files.

5. Prepare Terraform Directory

- Unzip the eks-terraform.zip and enter the terraform directory.

6. Generate SSH Key Pair

- Execute the script gen_private_public_key.sh to generate a key pair for logging into the bastion host. The keys will be stored in the files directory.

7. Set Environment Variables

Set the following environment variables to pass the AWS credentials as Terraform variables:
export TF_VAR_aws_access_key_id=<AWS_ACCESS_KEY_ID>

export TF_VAR_aws_secret_access_key=<AWS_SECRET_ACCESS_KEY>

- Replace <AWS_ACCESS_KEY_ID> with the value of your **Access Key ID**.
- Replace <AWS_SECRET_ACCESS_KEY> with the value of your **Secret Access Key**.
- These variables are required during remote-exec for Terraform.

8. Initialize Terraform

Run the following command to initialize Terraform:
terraform init

9. Apply Terraform Configuration

Run the following command to apply the Terraform configuration:
terraform apply

10. Retrieve Bastion Host Public Address

Once the Terraform apply process is complete, it will output the public address of the bastion host. Keep this address handy for accessing the bastion host.