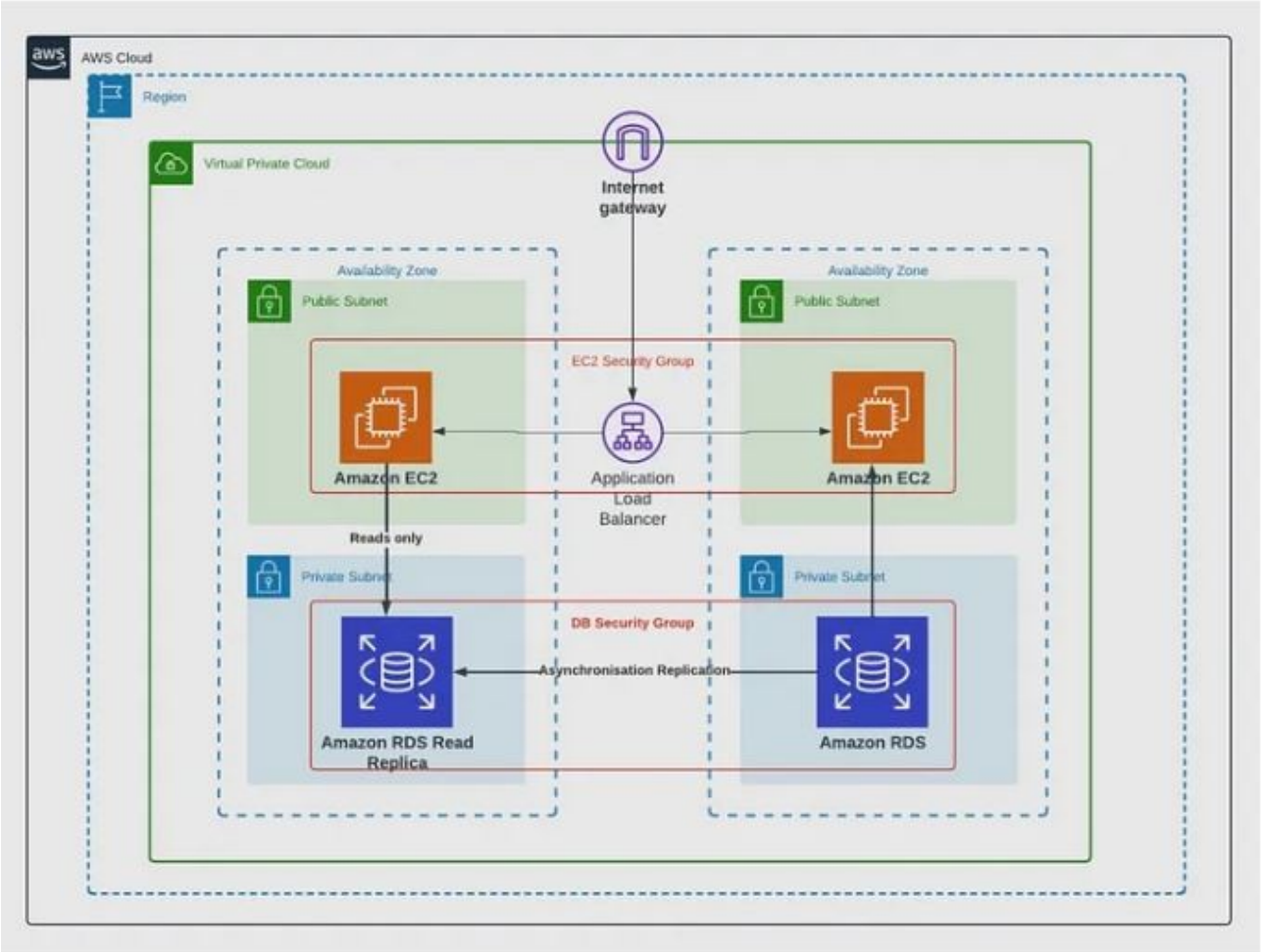
Deployment of WordPress Infrastructure on AWS using Terraform

Overall Design Picture:



Description:

We have dedicated AWS VPC in the AWS region US-East-1, with separation of the resources in two availability zones: US-EAST-1a and US-EAST-1b.

The architecture is as follows:

- Internet Gateway, with connection to outside.
- Application Load Balancer, who is managing the traffic between the resources.

- EC2 instances - Primary and Secondary, who are managed by the LoadBalancer regarding the incoming traffic requests.
- RDS database MySQL - Master and Replica, protected by separate security groups.
- EC2 and RDS security groups

Additionally, we have configured:

- monitoring via CloudFront (CPU load and Networking)
- AWS WAF (web application firewall) - with defined limit of 10000 requests/per second from IP.
- Backup solutions - on storage level and on RDS level:

* On storage level we have defined automated backup plan, per which the data is getting archived on dedicated S3 bucket, and has movement cycle at every 14 days to cold storage, where is being kept for retention cycle of 1 year.
* On RDS backup level, Master database is getting archived and retained on each 7 days during the timeframe of 00 - 02:00.

Also there is defined autoscaling feature, starting by 2 up to 10 instances, depending on the load.

If one of the instances goes down, the other should be capable to hold the infrastructure.

Assuming that the master database is getting replicated, it should continue to be available during such a situation.

For CI/CD solution, could be used multiple options: AWS CodeCommit or EC2 with Jenkins, or EKS with Jenkins etc.

At this point, this feature is optional and could be discussed in separate manner.

Important requirements for the setup process (prior running terraform) are:

To be configured:

1. Keypair with name wordpressKey (PEM)
2. S3 bucket, which will be used for terraform backend, with enabled versioning and encryption.