Development Manager – Digital - Assessment

Part 1 - Infrastructure

Create a simple load balanced web application in AWS using the free tier, and then assign an outside user access to login to that AWS account to see the results.

Please follow any naming convention you deem suitable for all the infrastructure you setup, as well as the same security setup you would for a production environment.

Requirements

1. Create an AWS account using your own credentials. You will need to enter your credit card details but you should ensure to stick to the AWS free tier not to incur any costs. This account can be deleted once it has been reviewed.
2. Setup an IAM user that you will use to setup the infrastructure, do not use the root account.
3. Delete the default VPC and all its relevant infrastructure.
4. Setup your own VPC, including two public subnets in two availability zones but in the same region (Ireland works well – EU-WEST-1).
5. These subnets should have internet access.
6. Setup two EC2 instances, both Linux hosts.
7. On the Linux hosts set up the webserver of your choice and deploy a simple application to return the host name and IP address of the current server.
8. Setup a web load balancer, and load balance the traffic to the two hosts.
9. Setup an IAM user with only console access and send us the credentials, as well as the URL of the Load Balancer so we can test that the web servers work.

Part 2 - Application

Write a version of Conway's Game of Life (http://en.wikipedia.org/wiki/Conway's_Game_of_Life) that generates a random placement of cells as its initial state and iterates through generations displaying each state.

Requirements

1. Your program should allow for a configurable board size and number of generations.
2. Do not spend too much time polishing the UI - a simple command line application that prints to STDOUT would be sufficient.
3. Ensure sure you have sufficient test coverage and that the tests document the program clearly.