AWS Fundamentals – Assignment #1

OBJECTIVE

At the end of this assignment you will have created a web site using the following Amazon Web Services: EC2, EBS, ELB, EIP and S3.

Stage 1: Building the EC2 web server and Elastic Load Balancer.

Launch an EC2 instance, based on Linux or Windows, to meet the following objectives:

- the instance should be of type t2.micro.
- the instance should reside within region ap-southeast-1 within availability zone apsoutheast-1a.
- the instance should use a 1 GiB attached EBS volume and contain a valid partition table with one partition. The partition should contain a valid file system.
- the file system residing on the EBS volume should be mounted automatically upon reboot of the EC2 instance.
- the instance should serve web pages via an appropriate service such as Apache or IIS. This service should start automatically upon boot.
- the instance should serve a web page “index.html” containing well-formed HTML displaying the text "**Hello AWS World**" and display **the screen shots** created below in Stage 3 (they will be hosted separately). The HTML file should reside on the file system within the previously created EBS volume and be served as the default document from the web server root.
- the instance should use Security Groups effectively to allow administration and serve HTTP.
- the instance should be associated with an Elastic IP address.

Stage 2: Configuring the Elastic Load Balancer:

Create an Elastic Load Balancer (ELB) or Application Load Balancer (ALB) with the

following specification:

- the ELB/ALB should be created in the Singapore region.
- the ELB/ALB should accept HTTP on port 80.
- the Healthy Threshold for the ELB/ALB to be set to 2
- deliver traffic to the EC2 instance created in Stage 1.

Stage 3: Configuring S3

Create a Simple Storage Service (S3) bucket with the following specification:

- the bucket should be created in the Singapore region.
- the bucket should be publicly readable with setting bucket policy.

Place the screen shots in the S3 bucket that you created, in png format, clearly showing the following:

1. The mounted EBS volume e.g. using Windows Explorer or run "df" from the console on a Linux host. This screen shot should be named as screen-shot1.

2. The index.html file resides within EBS e.g. using windows explorer or run "pwd; ls -l" from the terminal on a Linux host. This screen shot should be named as screenshot2.png.

3. The web server has been configured to serve index.html from the EBS volume as the default document e.g. the relevant section of the Apache configuration file or IIS Manager. This screen shot should be named as screen-shot3.png.

4. The instance's security group settings, i.e. using AWS Management console or CLI to show the inbound and outbound settings. This screen shot should be named as screen-shot4.png.

5. The ELB's healthy threshold setting. This screen shot should be named as screenshot5.png.

6. The ELB connected instance, this screen shot should be named as screen-shot6.png.

7. The EC2 instance's detail information showing that instance is t2.micro, instance resides within region ap-southeast-1 within availability zone ap-southeast-1a, and also other information including instance's EIP, security group name. You could use

either AWS management console or CLI to show these information, and the screen shot should be named as screen-shot7.png.

Remember to use the screenshot S3 URLs in the index.html file hosted on EC2 (see Stage 1)
Optional: if you choose to extend the solution with CloudFront then use CloudFront URLs.

DELIVERABLES

Please provide to mwwng@amazon.com the following information:
- the public DNS entry for the EC2 instance, displaying "Hello AWS World" text **and 7 screenshots.**
- the public URL to the web page via the ELB, displaying "Hello AWS World" text **and 7 screenshots.**
- the seven S3 links for screenshot-1.png, screenshot-2.png, screen-shot3.png, screen-shot4.png, screen-shot5.png, screen-shot6.png, and screen-shot7.png respectively

Please Note: Ensure that you leave your solution up and running and available in order for it to be evaluated. This should occur within three business days of submitting your assignment. Upon receiving feedback from the Recruitment Team, you should terminate and delete all resources you used for the assignment so as to avoid any unnecessary charges.