

Assignment lab 2

Append screenshots and answers to the questions to this document

1. EC2 – using Console Window

- Using the console window, create an ubuntu ec2 instance (**always use t2.micro instance types for Free Tier**) and ssh into it using putty.
- Install awscli, webserver and php on it and make sure you can access the website from the internet.
- Upload an index.php file (`<?php echo phpinfo(); ?>`) to an S3 bucket. Use the cli in your ec2 instance (attach a role to your instance, do not configure a user in your ec2 instance) to copy the file from S3 to the root of your webserver.
 - Save all commands that you used to install the webserver
- Terminate the instance
- Start a new instance but now add the commands to the install php and apache or nginx and copy the index.php file from S3 as User Data (bash script under advanced options). The webserver should be accessible without having to ssh into your instance to install or change anything.
- Turn on termination protection on the instance, try to terminate the instance in the management console and by using the cli on you laptop/computer.
- Stop the instance and start it again. Is the webserver still accessible using the same public IP address?
 - Solve and test this by attaching an Elastic IP to the instance
- Add an encrypted volume to the EC2 instance and make sure that you can access the volume within the EC2 instance
 - Can you change the volume type after it is created
- Create an EFS file system and mount it on your EC2 instance. Move the root of you webserver to a folder on the EFS file system. Make sure the EFS file system mounts on boot.
- Create an AMI from your ec2 instance and launch a new instance using this AMI
 - Is this webserver also accessible using it's public ip address?
- Change the index.php file, which is stored on EFS, on the first EC2 instance. Is the file also changed on the second EC2 instance? Is the change visible when accessing the websites of both webserver?

2. EC2 – using CLI

- Create a bash script on your computer that will:
 - o Spin up an EC2 instance with a bash script which:
 - installs Apache or Nginx
 - installs php
 - installs awscli
 - copies the index.php web page from your S3 bucket to the root of your webserver.
 - Creates an info.html file in the root folder of your webserver that contains the public ip address and the hostname of the EC2 instance (use userdata: curl <http://169.254.169.254/>...)
- Create a bash script on your computer that will:
 - o Spin up an EC2 instance using the AMI you created in the first part of this assignment. After spinning up the EC2 instance, your website, stored on EFS, should be accessible.
- **Terminate all EC2 instances and remove all volumes, AMI's, Elastic IP's and EFS file systems.**
- **Keypairs and Security Groups don't cost anything**