**Working with a DevOps CI/CD Pipeline in AWS**

**Introduction**

In this lab, we will create a Continuous Integration/Continuous Delivery pipeline using AWS, and then use that pipeline to deploy a new version of our website automatically. We'll implement this with AWS CodeStar, a frontend tool that will automatically configure AWS CodeCommit, AWS CodeBuild, AWS CodeDeploy, and AWS CodePipeline. By the end of the lab, you should understand what a CI/CD pipeline is, as well as the basics of how to set one up and push an update to a source code repository to trigger a new deploy.

**Solution**

Log in to the live AWS environment using the credentials provided. Make sure you're in the N. Virginia (us-east-1) region throughout the lab.

**Create a CI/CD Pipeline**

1. Navigate to CodeStar.
2. Click **Create project**.
3. If the *Create service role* dialog appears, click **Create service role**.
4. Click the **HTML** card.
5. Click **Services** and open **EC2** in a new tab.
6. Click **KeyPairs** located in the navigation menu.
7. Click **Create key pair**.
8. For *Name*, enter **pipeline**.
9. Click **Create key pair**.
10. Back in the CodeStar browser tab, close the key pair dialog.
11. Click **Next**.
12. For Project name, enter **Pipeline**.
13. For the repository, select **AWS CodeCommit**.
14. For the *Instance type*, select **t2.micro**.
15. Choose the Subnet for **us-east-1a**.
16. Choose the **pipeline** and click **Next**.
17. Click **Create Project**. It could take 5-10 minutes for the project to finish being set up.

**Deploy a New Version of a Website using a CI/CD Pipeline**

1. Click **View application** to navigate to our web application.
2. Back in the CodeStar browser tab, click **IDE**.
3. Click **Access your project code**.
4. Click **Edit in AWS CodeCommit**. This opens our repositories.
5. Click the **webpage** folder.
6. Click the **index.html** file. This is the code used to generate the website we just visited.
7. Click **Edit**.
8. Scroll down to line 61.
9. Change the h1 header in line 61 to:

Hello Cloud Gurus!

1. Change the h2 header in line 62 to:

You just deployed using your own CI/CD pipeline!

1. In the *Commit changes to master* section, set the following values:
   * *Author name*: Your name
   * *Email address*: **test@test.com**
   * *Commit message*: **Update the website.**
2. Click **Commit changes**.
3. In the CodeStar browser tab, click **Pipeline** to watch it all be deployed.
4. Refresh the web app we visited before, where we should see our new message we just edited in the code.

**Conclusion**

Congratulations on successfully completing this hands-on lab!

