HU Extension Assignment 03 E-90 Cloud Computing

Handed out: 09/18/20145 Due by 11:59PM on Friday, 09/25/2014

For all problems, use AWS CLI for all work with AWS.

1. Create a custom AMI from an **EBS-backed** Bitnami image. You can use this AMI: ami-2881c240, or any similar one. **Make sure that the AMI and the instance you are using have PARAVIRTUAL and not HVM virtualization type**.
   Steps:
   a. Create an instance from a selected AMI
   b. Add a custom web page to the Tomcat server:

```
sudo mkdir /opt/bitnami/apache-tomcat/webapps/cscie90
sudo cp /opt/bitnami/apache-tomcat/webapps/examples/index.html
/opt/bitnami/apache-tomcat/webapps/cscie90
sudo vi /opt/bitnami/apache-tomcat/webapps/cscie90/index.html
```

   modify index.html however you want
   c. Verify you can access the new page via browser:
   `http://<your_public_ip1>/cscie90/`
   d. Stop your instance and create a new AMI from this instance using AWS CLI command.
   e. Create an instance from this new AMI
   f. Verify you can see your new web page on the new instance:
   `http://<your_public_ip2>/cscie90/`
   [30 points]

2. Select a small Amazon owned instance-store Linux AMI, for example, ami-6b726502. It has AMI and EC2 tools already installed. If you are comfortable with another AIM, please free to work with that AMI. **Make sure that the AMI and the instance you are using have PARAVIRTUAL and not HVM virtualization type**. Before you start using your instance run "`sudo yum update`" command as the Linux user. This will bring your EC2 AMI tools to the latest level. Modify something on your instance, so that you can later prove to yourself that your modification got carried over to the new AMI you will be creating and its instances. For example, add a simple file somewhere but not in `/mnt` or other directories that are excluded from the bundling process – for example, add a file "myNewFile.txt" to ec2-user's home directory. Bundle you instance up and create your own S3 backed replica image. Register your new AMI. Verify that you can run an instance based on that AMI. Check that your modifications survived the process. In every step, capture your AWS CLI Tools dialogs as text or JPG images. Where relevant, capture screen shots of AWS Console state. Grant access to your AMI to the general public. Start the process of trying to register your AMI as a paid AMI. You do not have to actually have a paid AMI in the Cloud and you certainly do not have to provide Amazon with any additional financial information, beyond what you have already given to them. Present all relevant steps in an MS Word document with a brief narrative of what

are you doing. Please be aware that you are charged for use of S3 buckets. Once you are done with the assignment, please discard all of your buckets, images and instances that you do not need for some other purpose. [35 points]

3. Create your own EBS Windows backed AMI. You can try this AMI: ami-cd9339a6. Add a small file to the instance, pretending that you are creating a new commercial product. Prove that you can create your own EBS backed AMI and run an instance created from that AMI. Do it using `aws ec2 create-image` command which you run from your client machine, Windows or MAC. Present detailed narrative of the process you are following, as if you are creating an instruction manual for your co-workers. [35 points]
   Tip: if you are getting an empty password when requesting it via 'aws ec2 get-password-data' command from your newly created image – try using the password of the original instance you've created this image from.

Place all of your narratives and illustrations in a single Word or PDF document named E90_LastNameFirstNameHW03.docx [.pdf]. Use this assignment as the initial template. Add your solutions below problem statements Upload your homework file into your Assignment 3 folder.