HU Extension Assignment 07 E-90 Cloud Computing

Handed out: 10/17/2015 Due by 11:59 PM on Friday, 10/23/2015

FINAL

Place all of your narratives and illustrations in a single Word or PDF document named E90_LastNameFirstNameHW07.docx [.pdf]. Use this assignment as the initial template. Please implement code solutions as a separate class in one (Java, C#, Ruby, Python,..) project. Add your steps and your code below problem statements used for that problem. Upload your homework file and your working code (e.g., filename.java) into your Assignment 7 folder. Do not include executables. Please also do not zip your files.

Problem 1)

1) Create a queue using Amazon's SQS Service. Set the visibility timeout to 20 seconds.
2) Insert a message and verify that you can retrieve and delete the message.
3) Subsequently insert another message, and retrieve that second message. Do not delete the second message but rather wait for 30 seconds (use Java `Thread.sleep()` or whatever you find suitable for that purpose).
4) Show that the message reappeared in the queue.
5) Add five more messages to the queue and then execute `GetQueueAttributes` call. Retrieve and display all attributes of your queue. In particular report on the average number of messages in the queue.
6) Finally, delete the queue.

   Do all of this using either Java, C# or some other AWS API you find convenient.

   Points: 25

Problem 2)

1) Create an SNS topic.
2) Subscribe one of your emails and one of your phones.
3) Confirm subscription to the topic manually from both the email and the phone.
4) Demonstrate that you can send the same message to both media.
5) Capture your actions on the email side.
6) Capture all subscription arn-s and all message arn-s.
7) [Optional] if you can, take a picture of your SMS message on your phone – or forward it to your email and demo it that way.

   Please, perform all tasks using AWS CLI. Only if AWS CLI really could not do the work (you must explain) you are allowed to use the AWS Management Console.

   Points: 15

Problem 3)

Do the same work as in Problem 2, but use Java/C# or any other programming language supported by SNS this time.

Attached files: CreateTopic.java and Publish.java have practically all elements you need.

Points: 20

Problem 4)

Demonstrate that you can send a message from an SNS Topic to an SQS queue using SNS and SQS Consoles. Please note that you will have to "Subscribe" SQS Queue to an SNS Topic on both sides, the Topic side and Queue side. In other words, on the side of SQS Console you do not confirm subscription the way you did it when the protocol was email, but rather "Subscribe to the Topic". Capture all relevant screen shots.

Points: 15

Problem 5)

Implement above task programmatically using Java, C# or any other AWS SNS supported language. This problem might require some literature (Internet) searching.

Points: 25