

☁ Cloud Computing - AWS Simple Notification Service Lab

Login to AWS and create your access keys (see lecture slides 10 - 13), note them down as you will need these later.

Firstly, you will practice creating topics, subscriptions and publish messages **manually**.

1. Login into AWS and navigate to the SNS dashboard.
2. Using the lecture slides create a new topic called "SNSLab". (**See lecture slides 14 - 18**)
3. Add subscriptions to the newly created topic. Add an email and SMS (use your mobile number) subscription. (**Slides 23-34**)
4. Manually publish a message to your topic and confirm that the message was delivered to all subscribers. (**Slides 28 - 30**)

Next, you will practice how to do all of the above **programmatically** using the Java programming language.

1. Either start a new Maven project in eclipse and import the required dependencies using the pom.xml file (example pom.xml file on Moodle) **OR** you can download and import the "starter project" in to eclipse.
2. Create a new java class called "AWSSnsUtils" and implement the class variables (i.e., keys) and constructor. (**Slide 20**)
3. Next implement the createSnsTopic method in the AWSSnsUtils class. (**Slide 21**)
4. Create a new class with a main method called "AWSSnsController" and test the createSnsTopic method by creating a new topic called "SNSJava". (**Slide 21**)
5. Next implement a method in the AWSSnsUtils class called "subEmail" that will add email subscribers to a topic given the topics ARN number (the ARN number of a topic can be found on the AWS SNS dashboard). (**Slide 26**)
6. Test the subEmail method in the AWSSnsController by adding your email as a subscriber to the "SNS" topic. (**Slide 26**)
7. Implement a method to publish messages to selected topics using the topic ARN, implement a method called publishToTopic in the AWSSnsUtils class. (**Slide 32**)

8. Next test the `publishToTopic` method in the `AWSSnsController` class, send a message to the “SNSJava” topic using the topic’s ARN number. (**Slide 32**)
9. Finally repeat steps 5 and 6 to implement a method to add SMS subscribers to the to a topic (**Slide 27**) and test by calling/using `publishToTopic` method again, *does the notification get delivered to all your topics subscribers?*