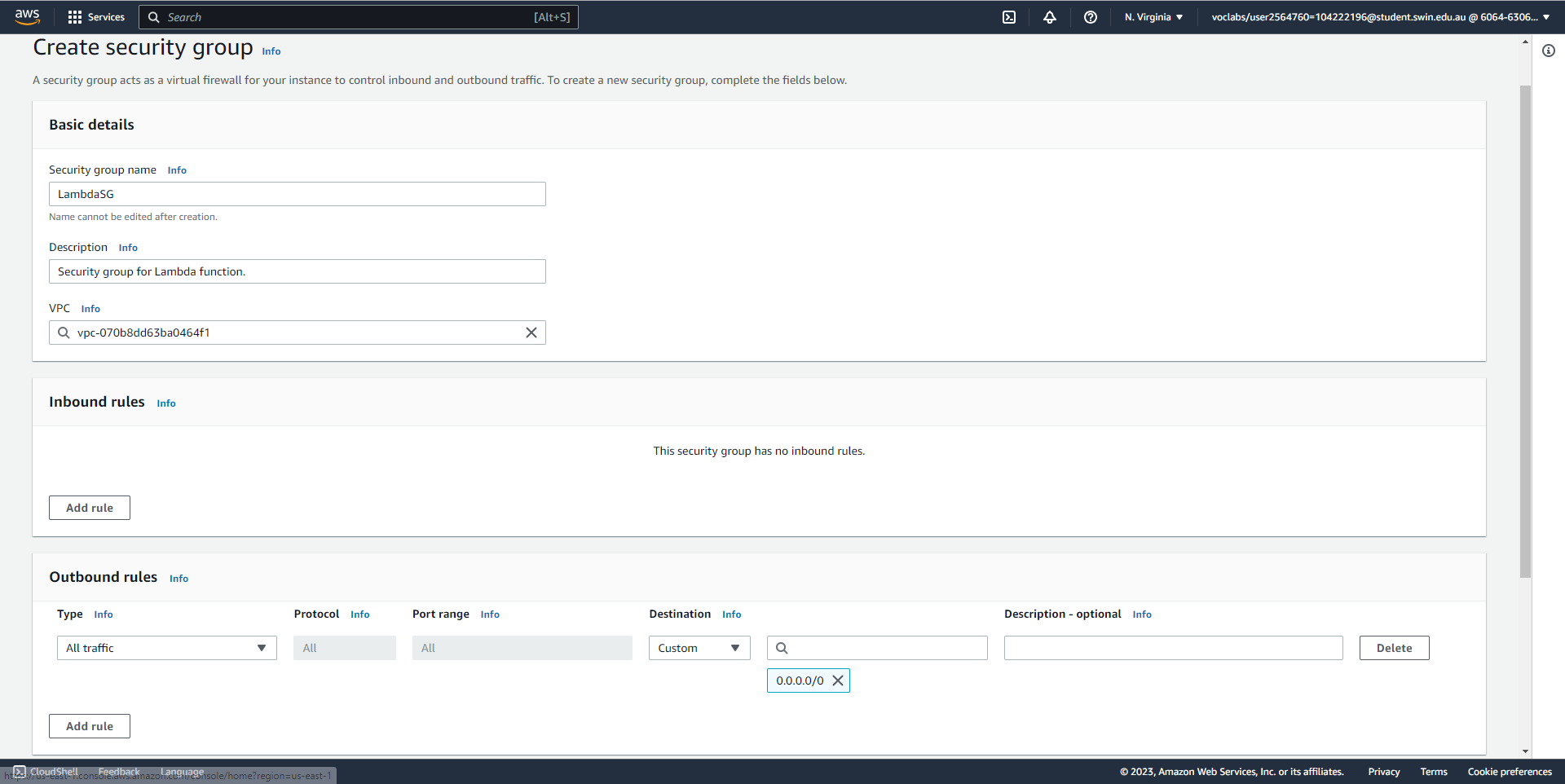
Ta Quang Tung – 104222196

COS20019 – Cloud Computing Architecture - Wk9: ACA Module 13 Challenge Lab - Implementing a Serverless Architecture for the Café

**Task 1 - Downloading the source code**

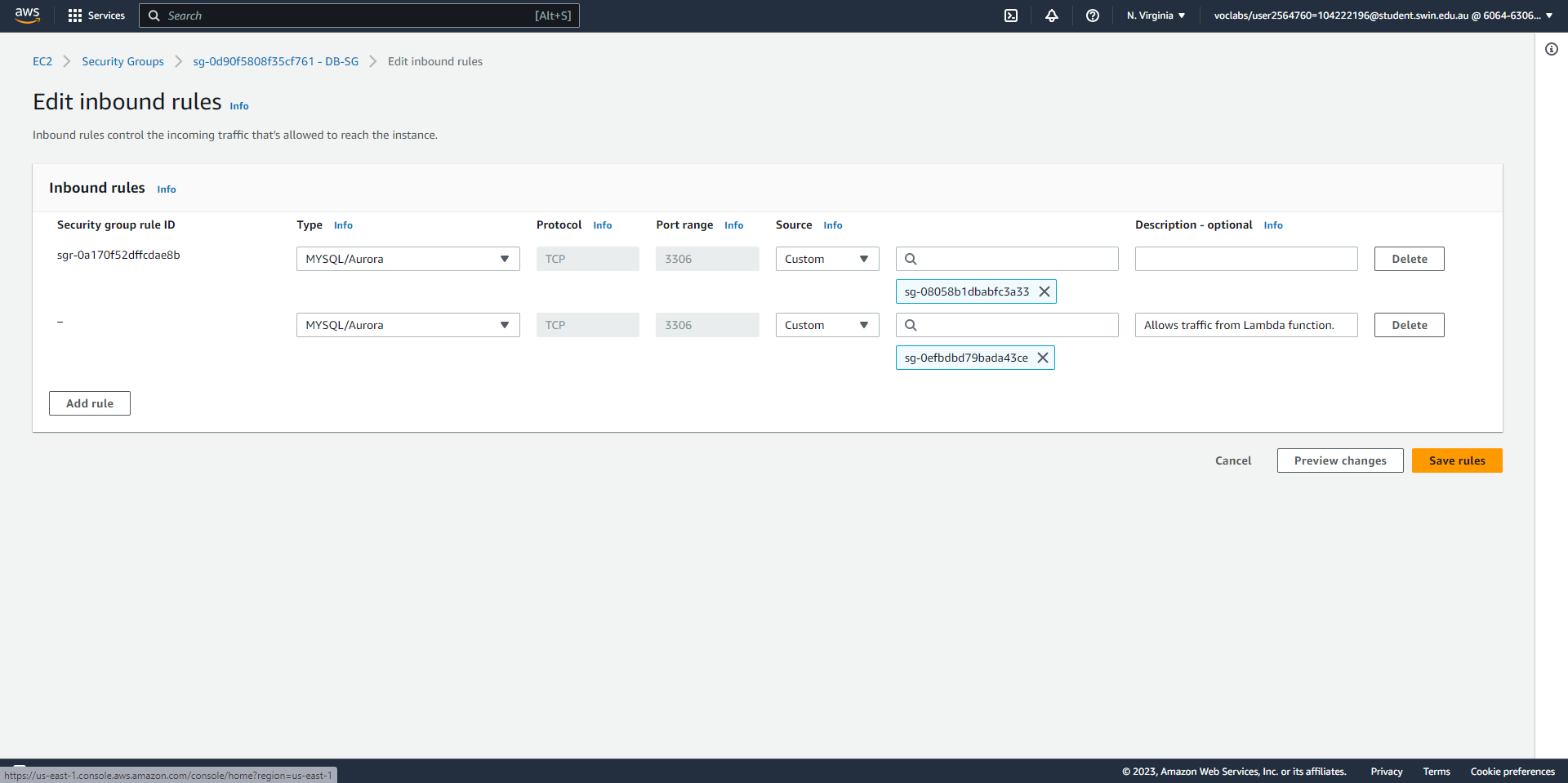
Code .zip files are downloaded from Canvas.

**Task 2 - Creating the DataExtractor Lambda function in the VPC**

****

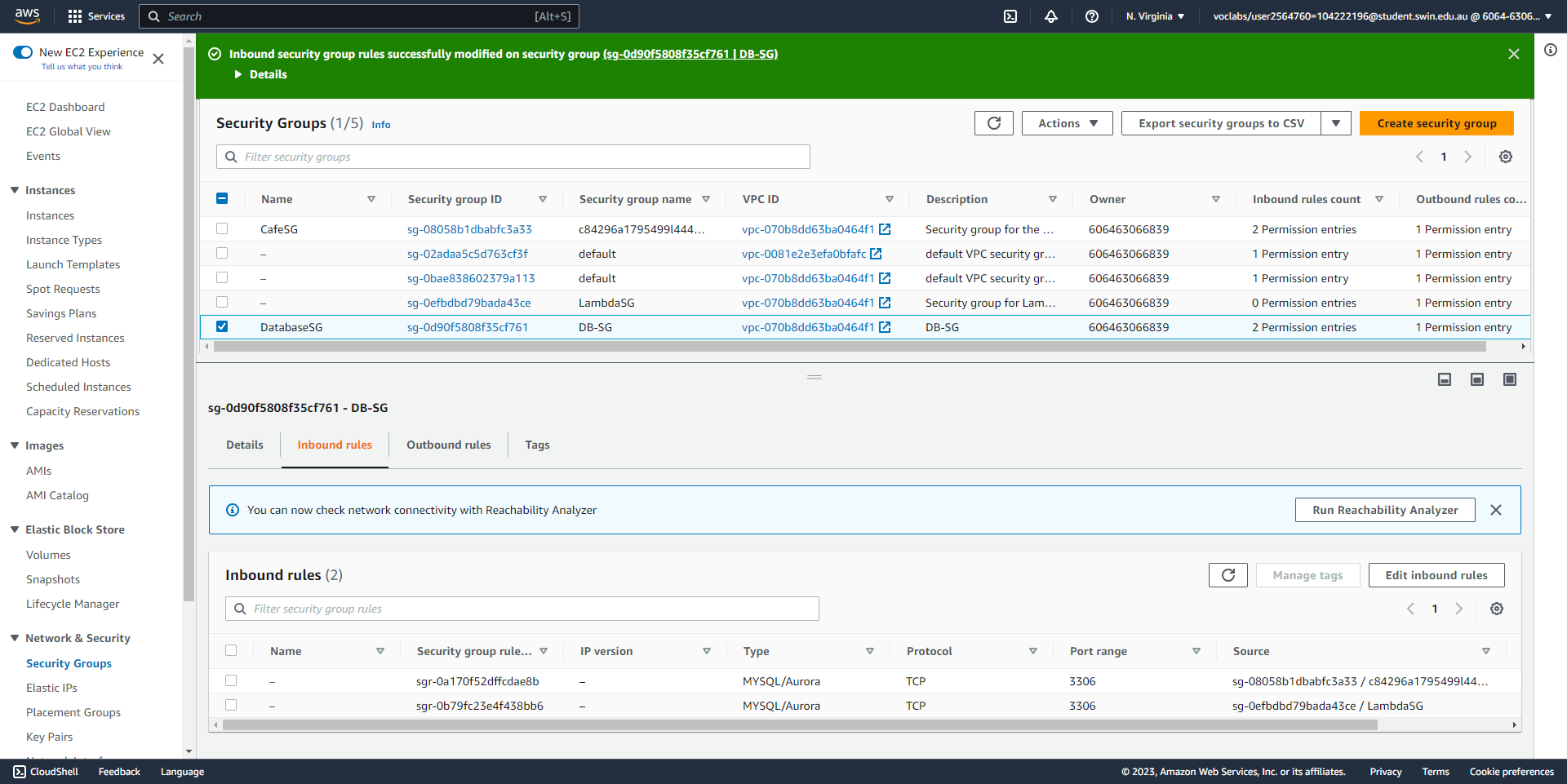


Create a security group for the Lambda function that allows all outbound traffic to all destinations.

****

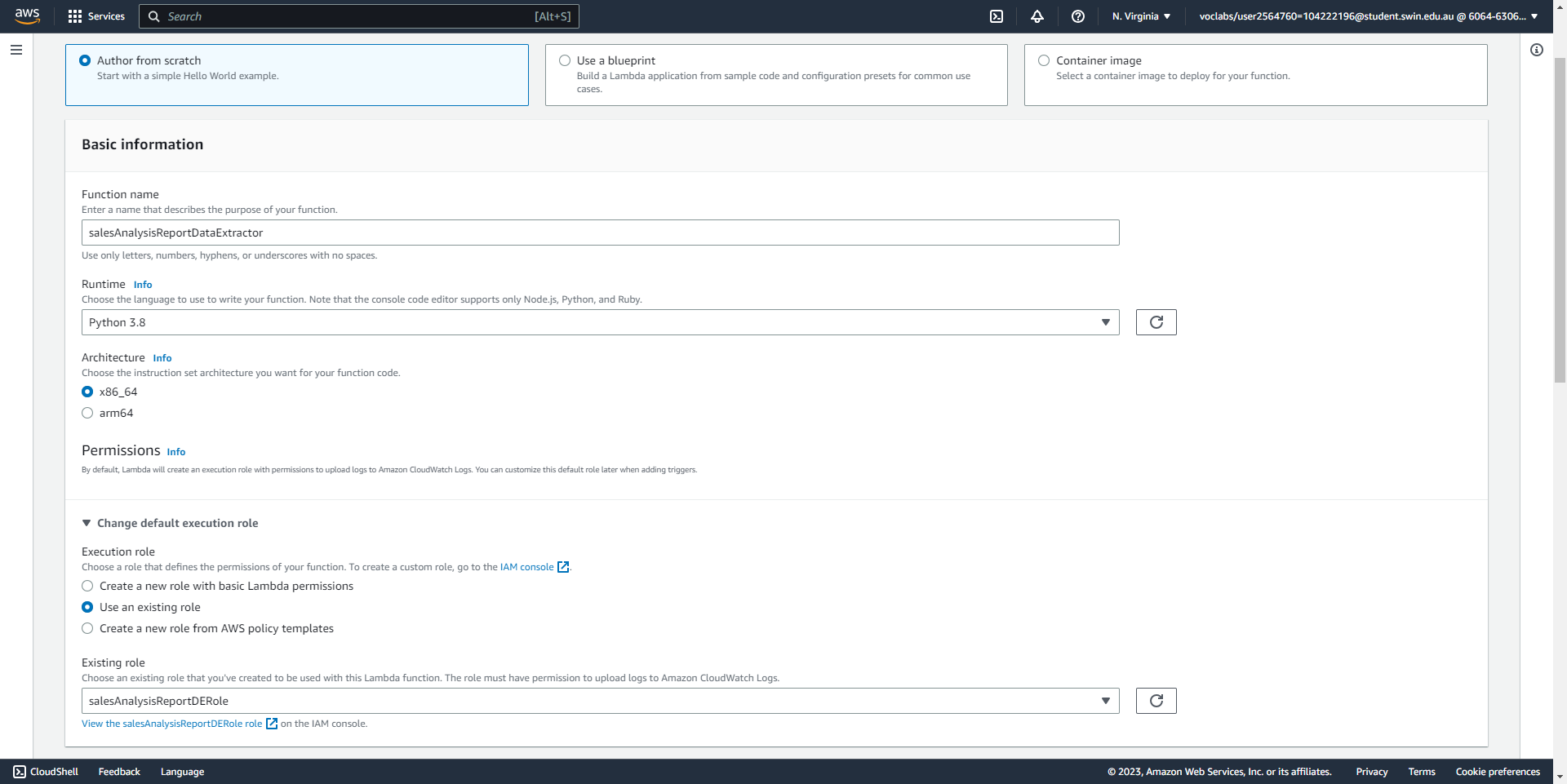


Update the Database SG to allow MySQL traffic from the Lambda function.

****

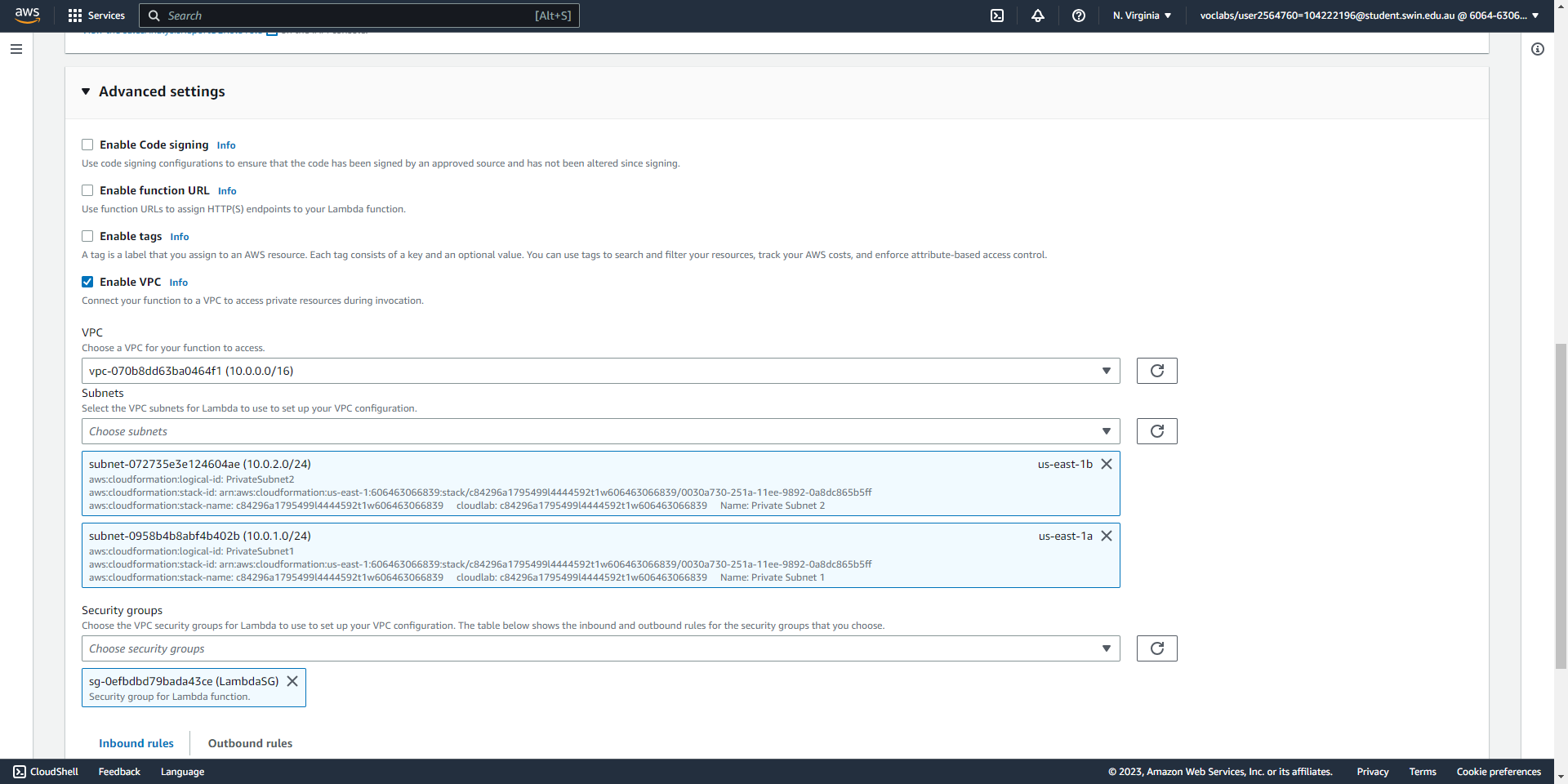


The security group has been successfully updated.

****

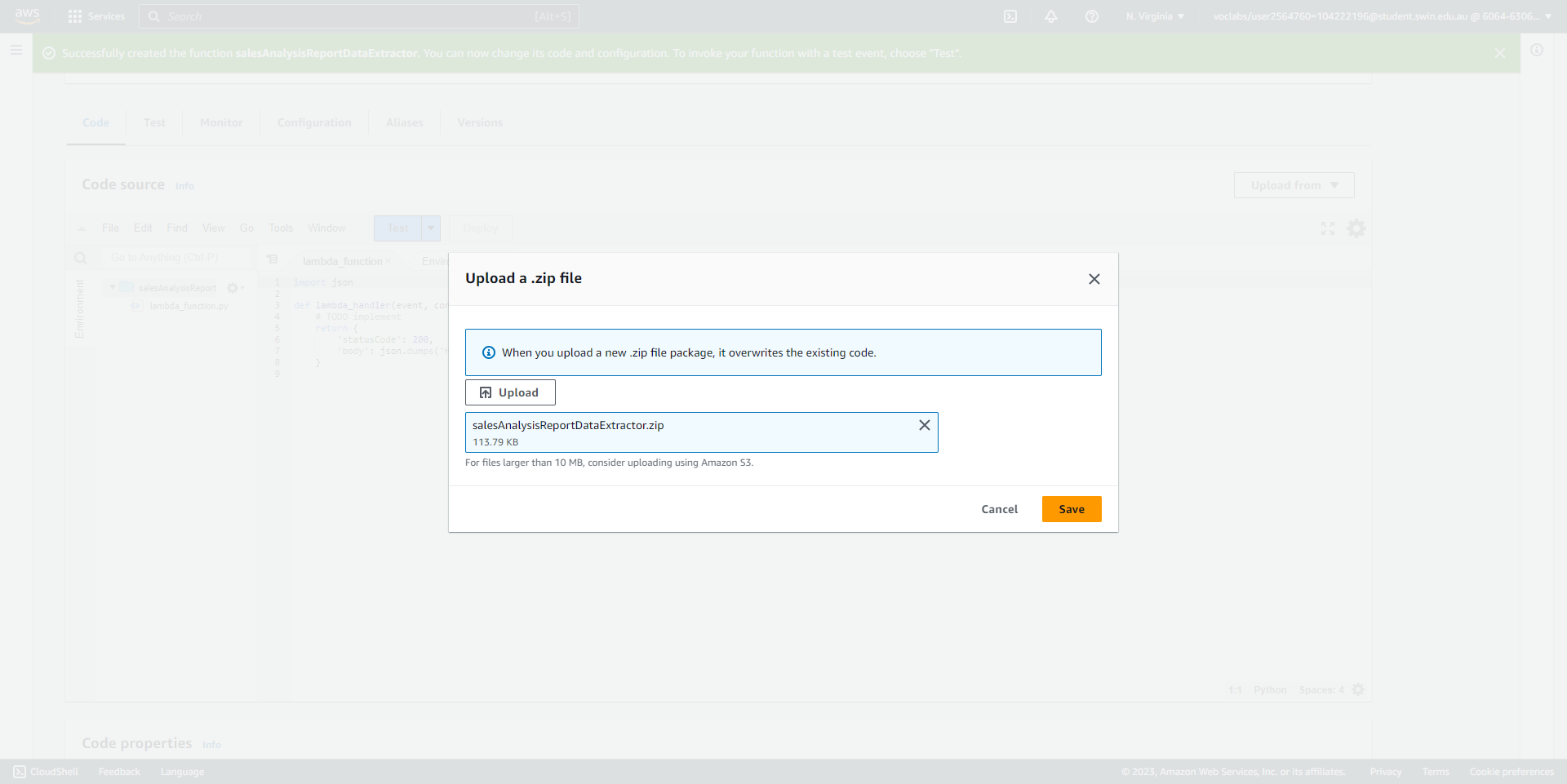


Create the Data Extractor Lambda function (part 1/2), specifying the correct name, runtime, and IAM role.

****

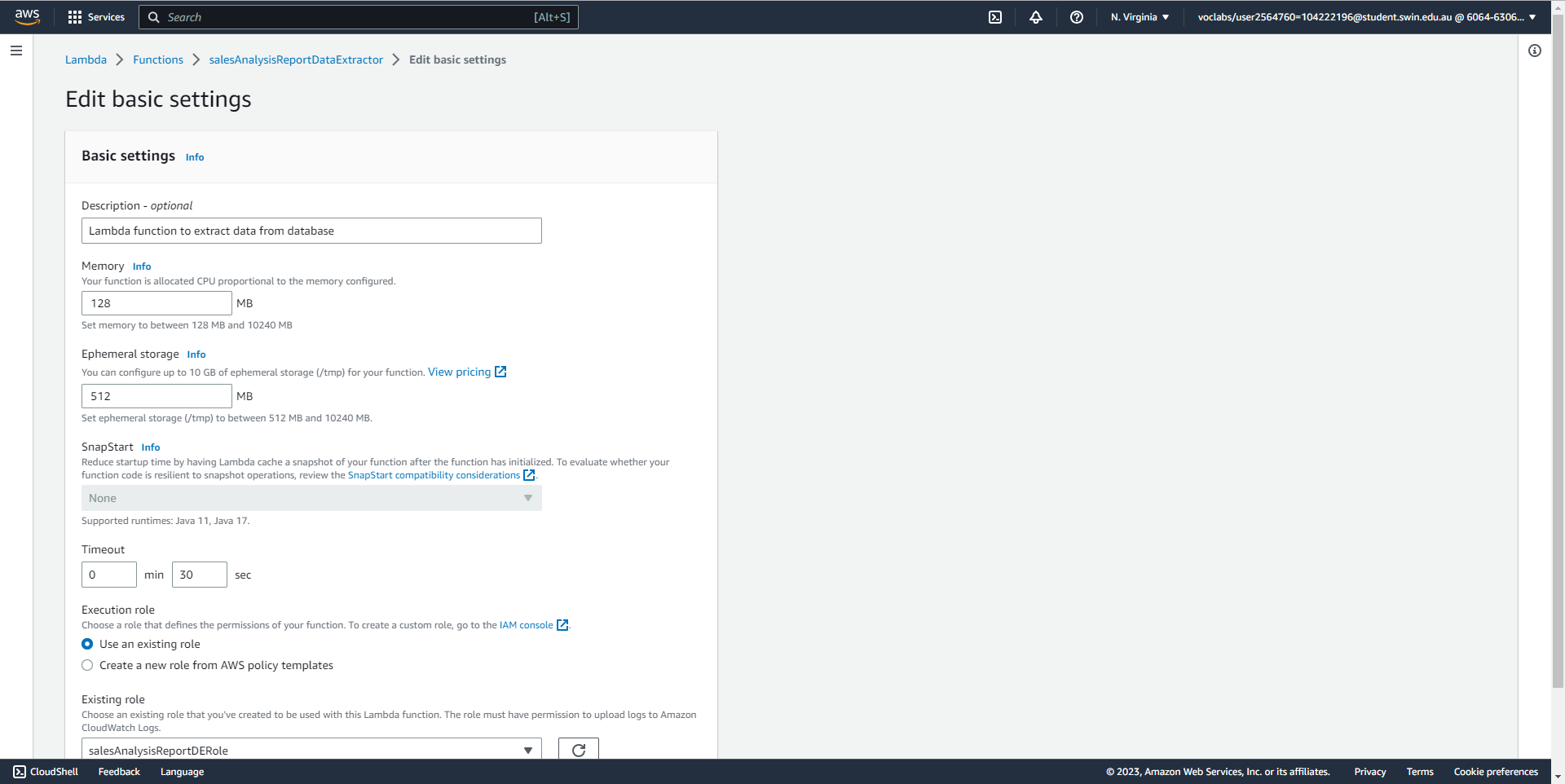


Create the Data Extractor Lambda function (part 2/2), specifying the correct VPC settings.

****

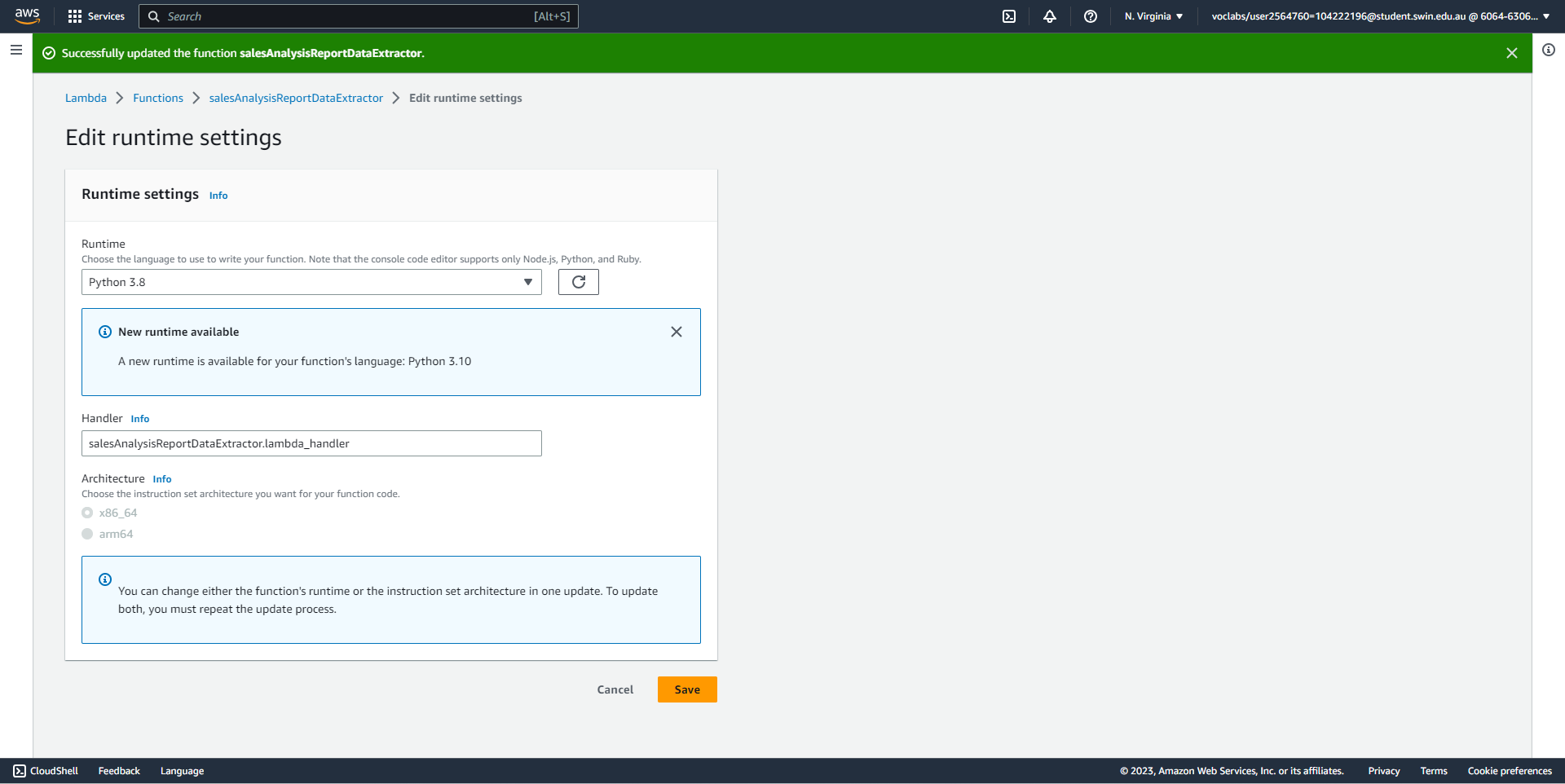


Upload the zipped code for the Data Extractor function.

****



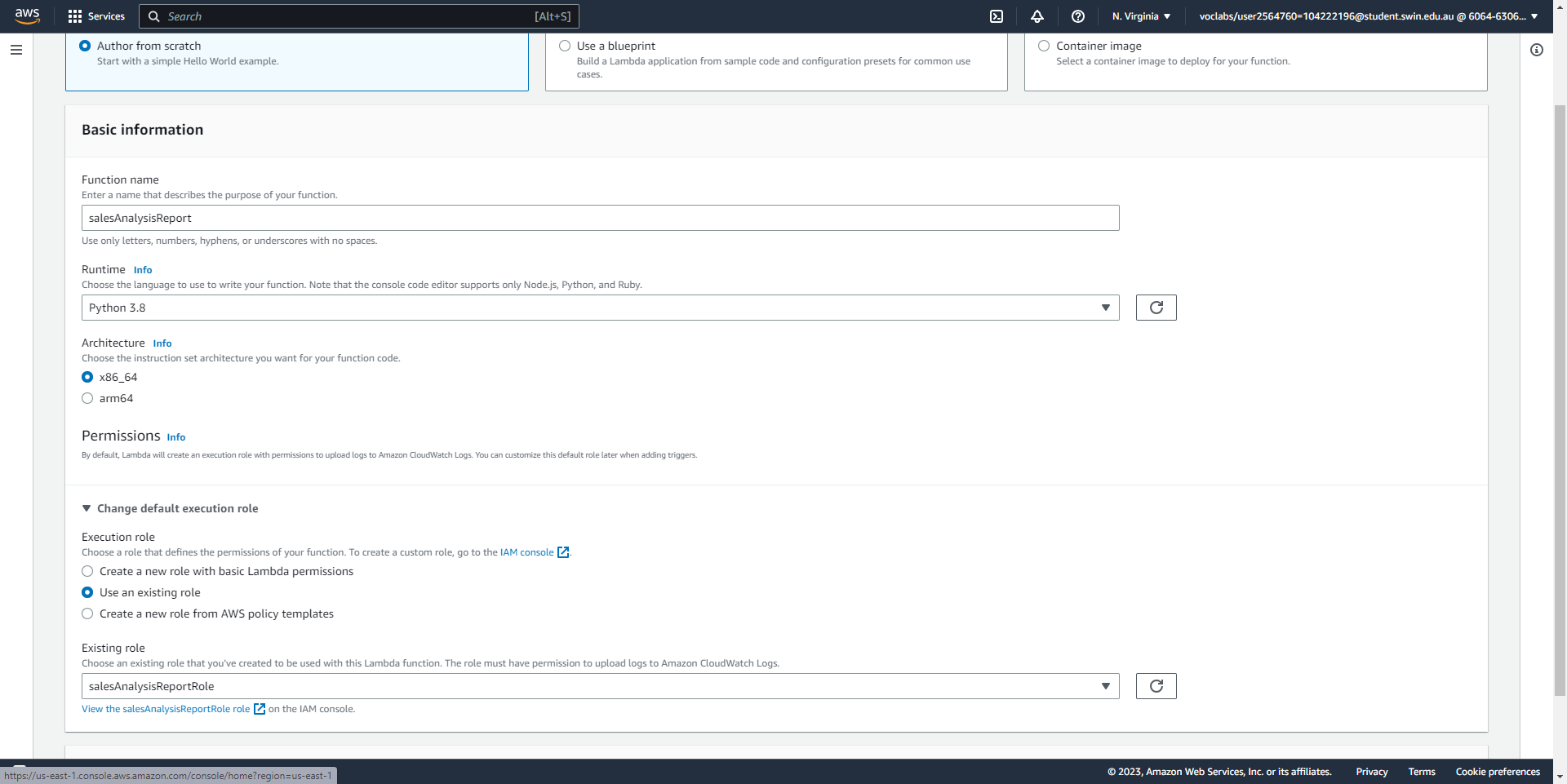
Configure the description, memory size and timeout for the Lambda function.

****



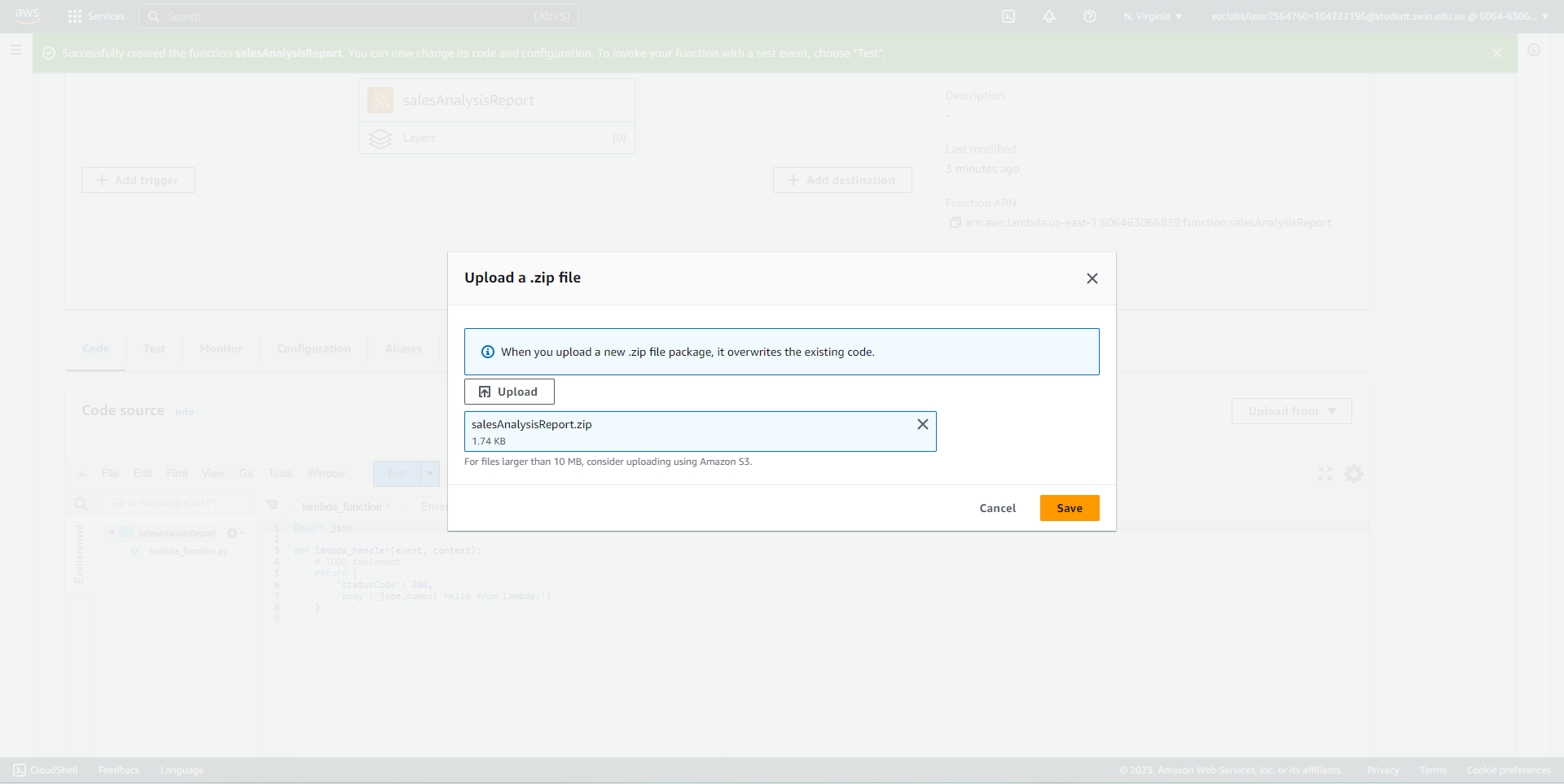
Specify the correct handler for the Lambda function.

**Task 3 - Creating the salesAnalysisReport Lambda function**

****

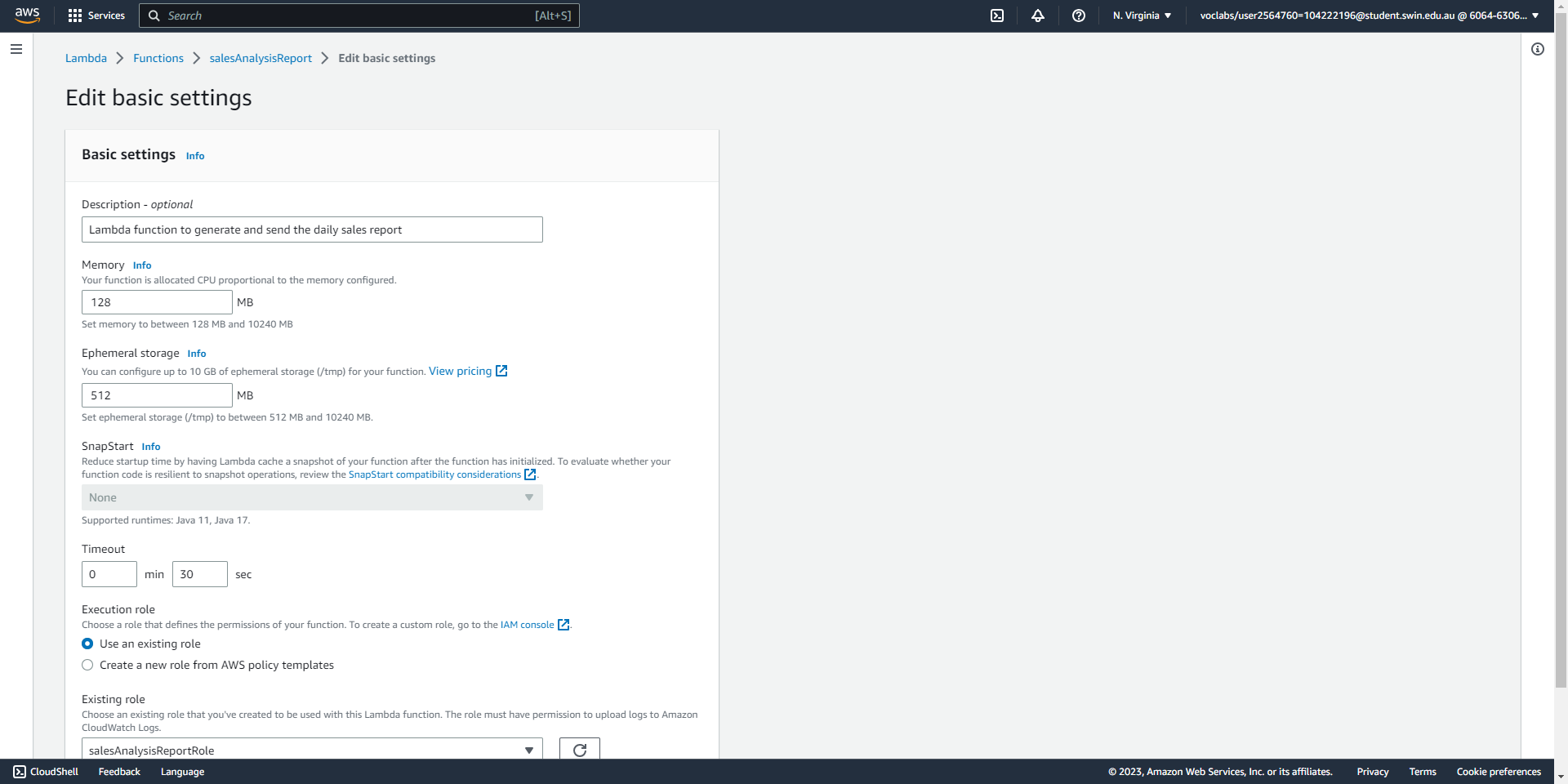


Create the Analysis Report Lambda function, specifying the correct name, runtime, and IAM role.

****

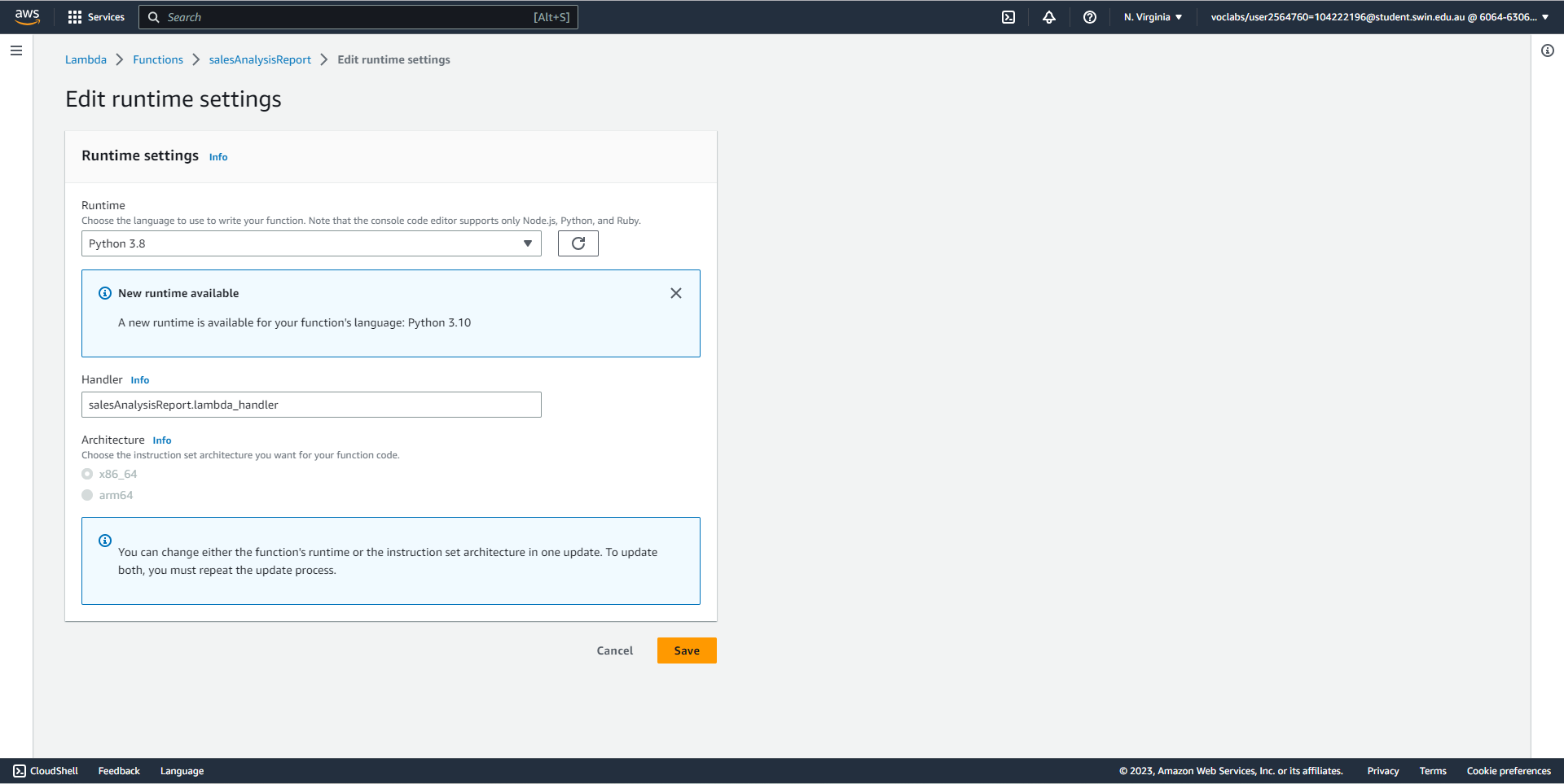


Upload the zipped code for the Lambda function.

****



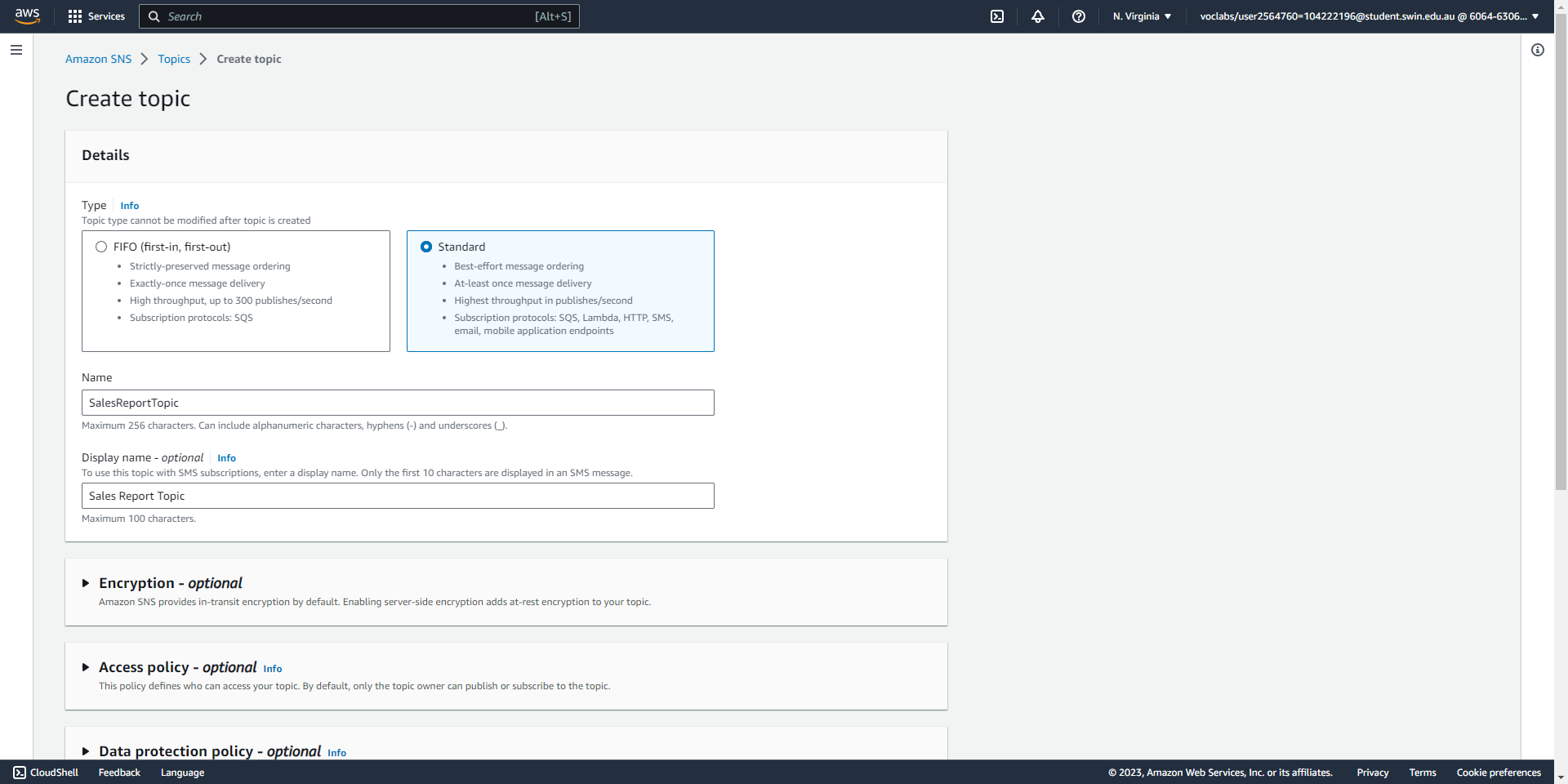
Configure the description, memory size, and timeout for the Lambda function.

****



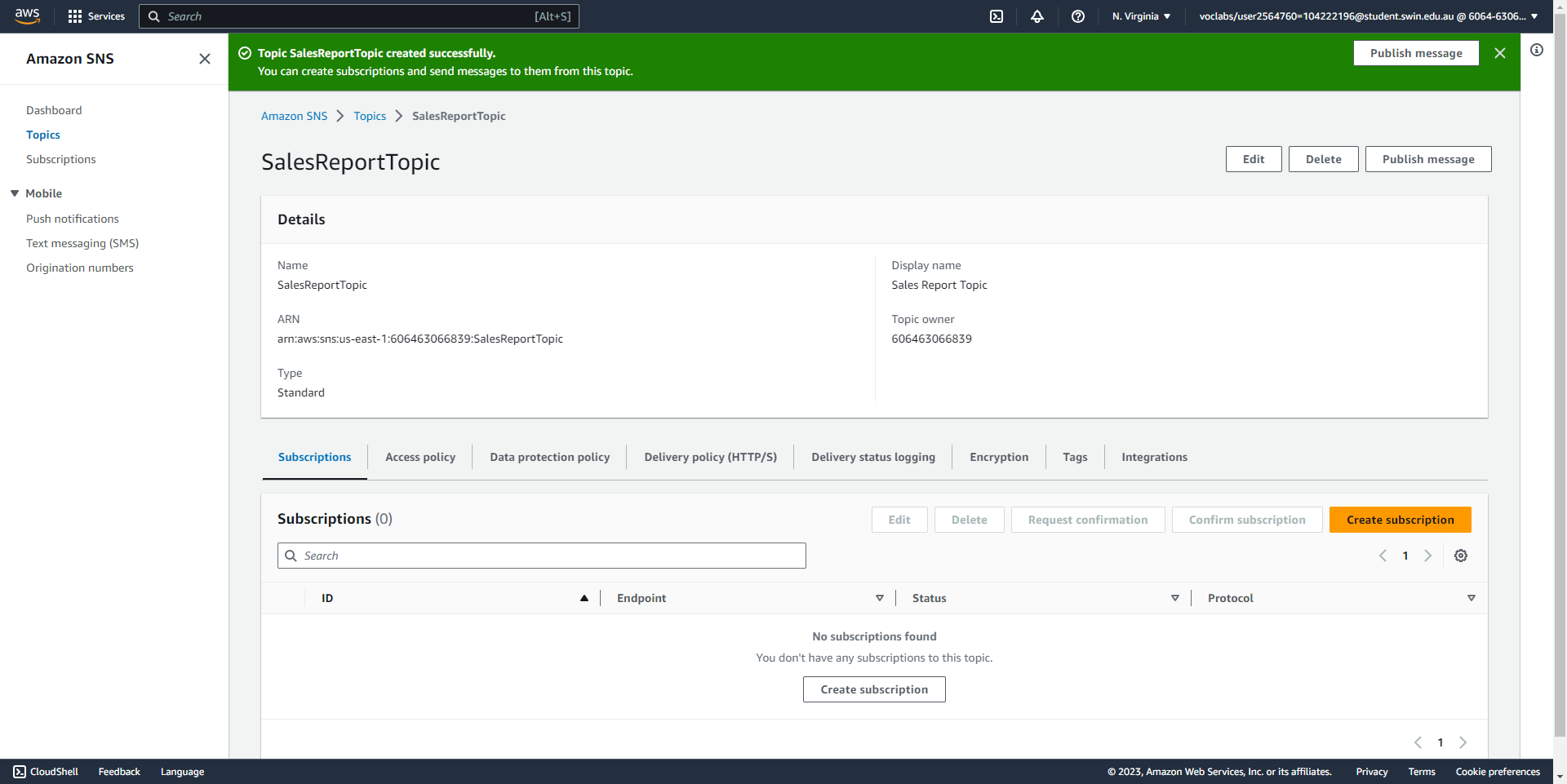
Specify the correct handler for the Lambda function.

**Task 4 - Creating an SNS topic**

****

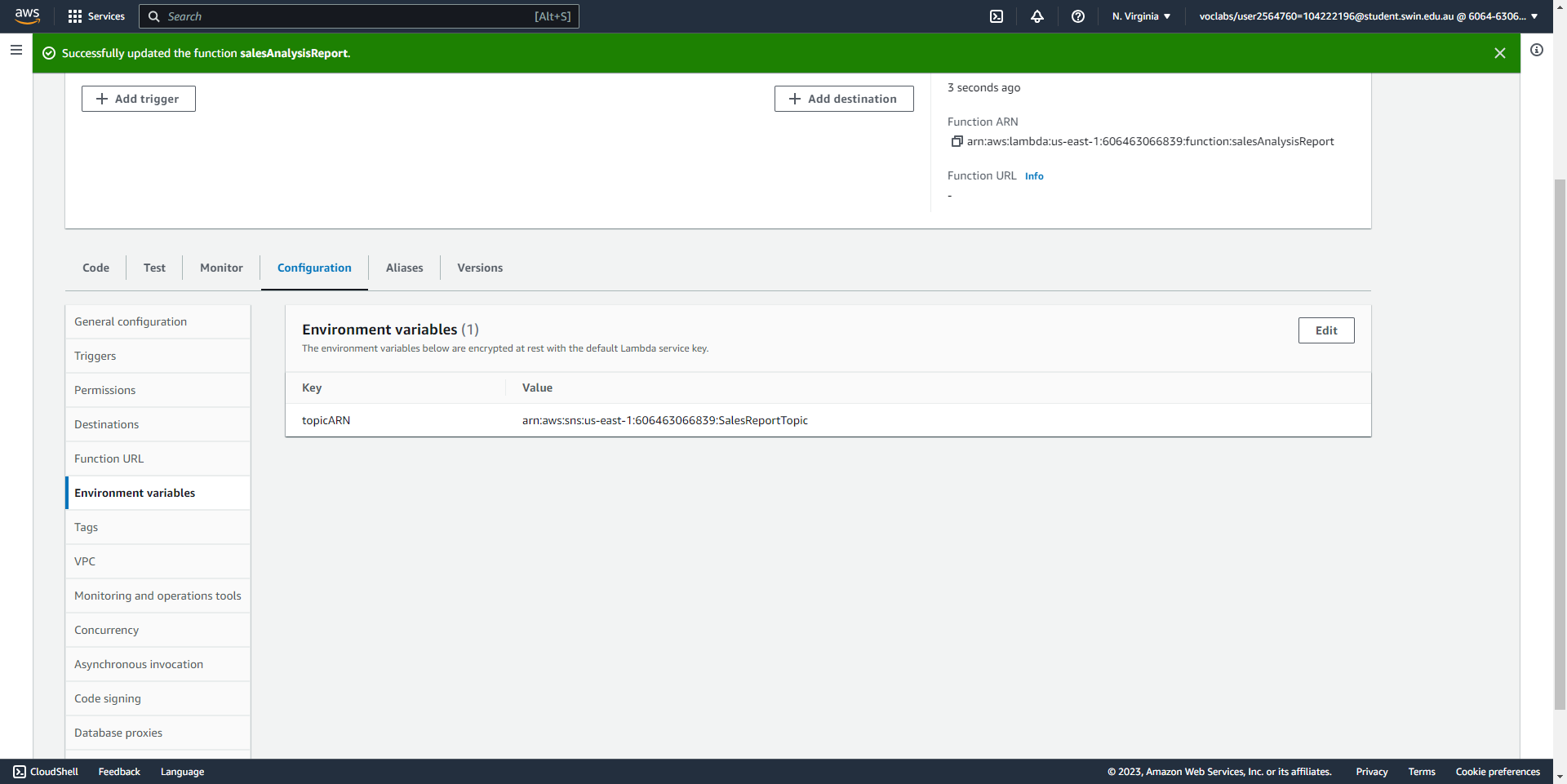


Create a standard SNS topic with the correct name and display name.

****



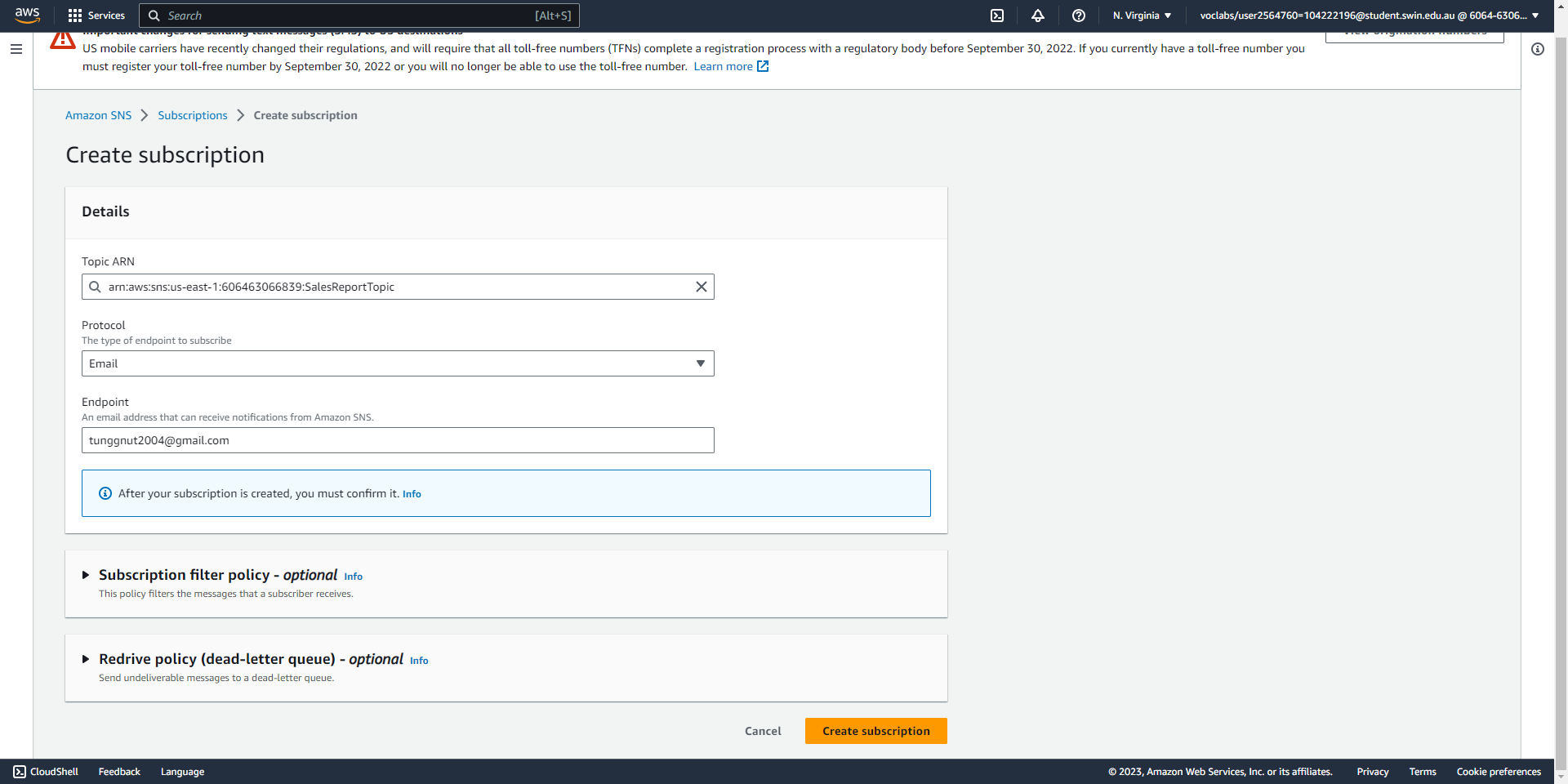
The SNS topic has been created successfully. Its ARN is shown above.

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Add an environment variable to the Analysis Report function that references the ARN of the SNS topic.

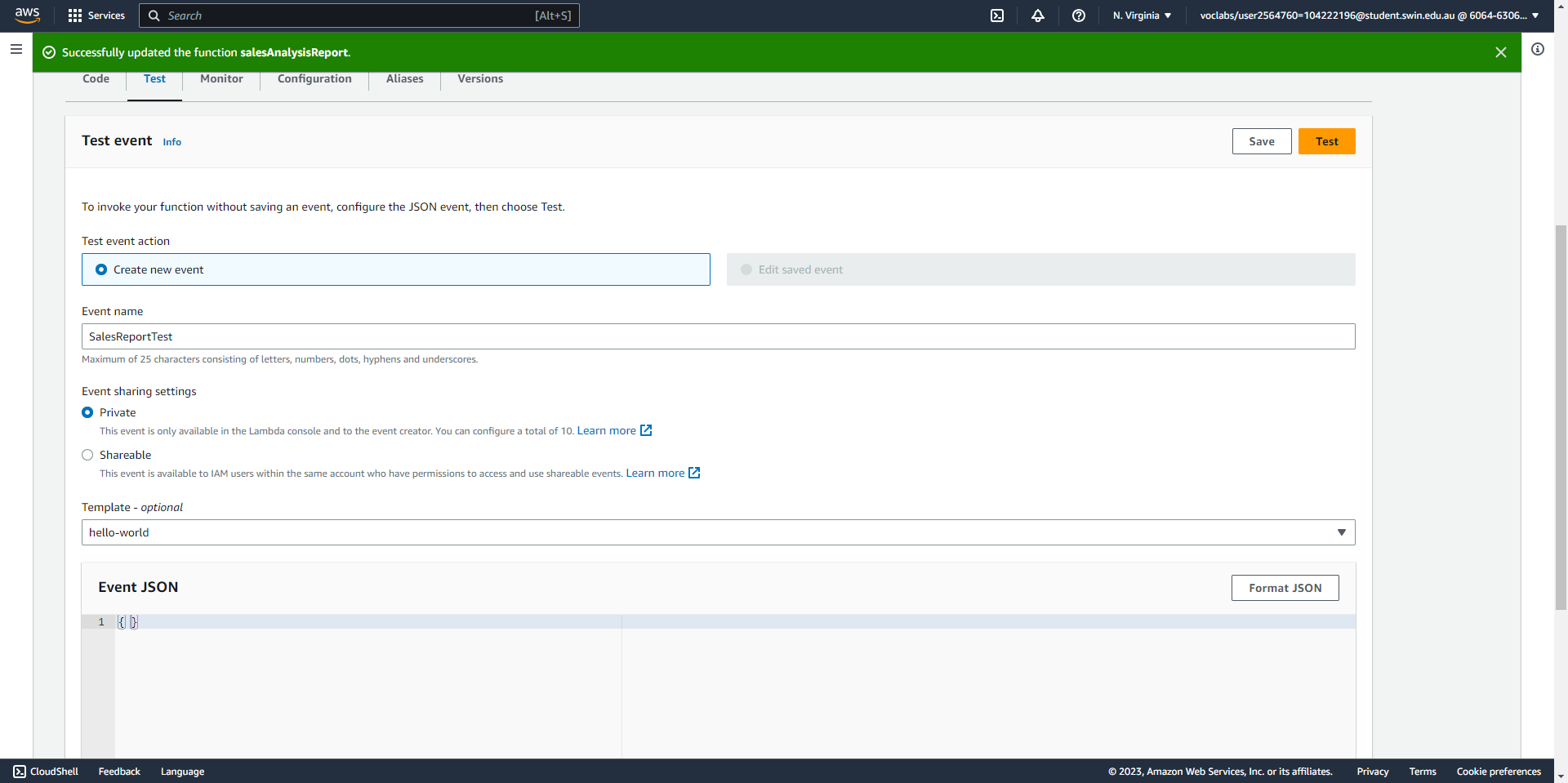
**Task 5 - Creating an email subscription to the SNS topic**

****

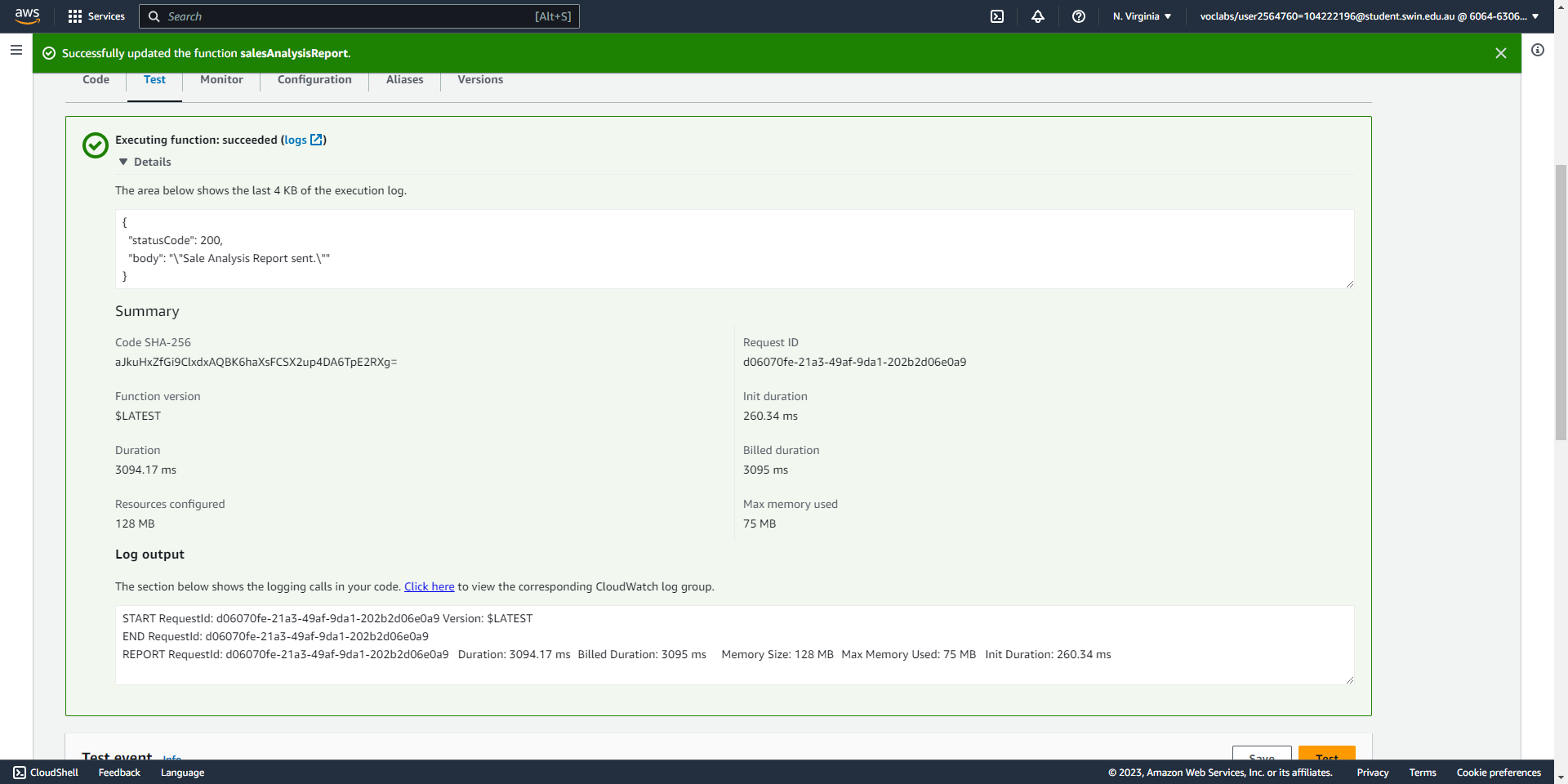


Create an email subscription to the SNS topic.

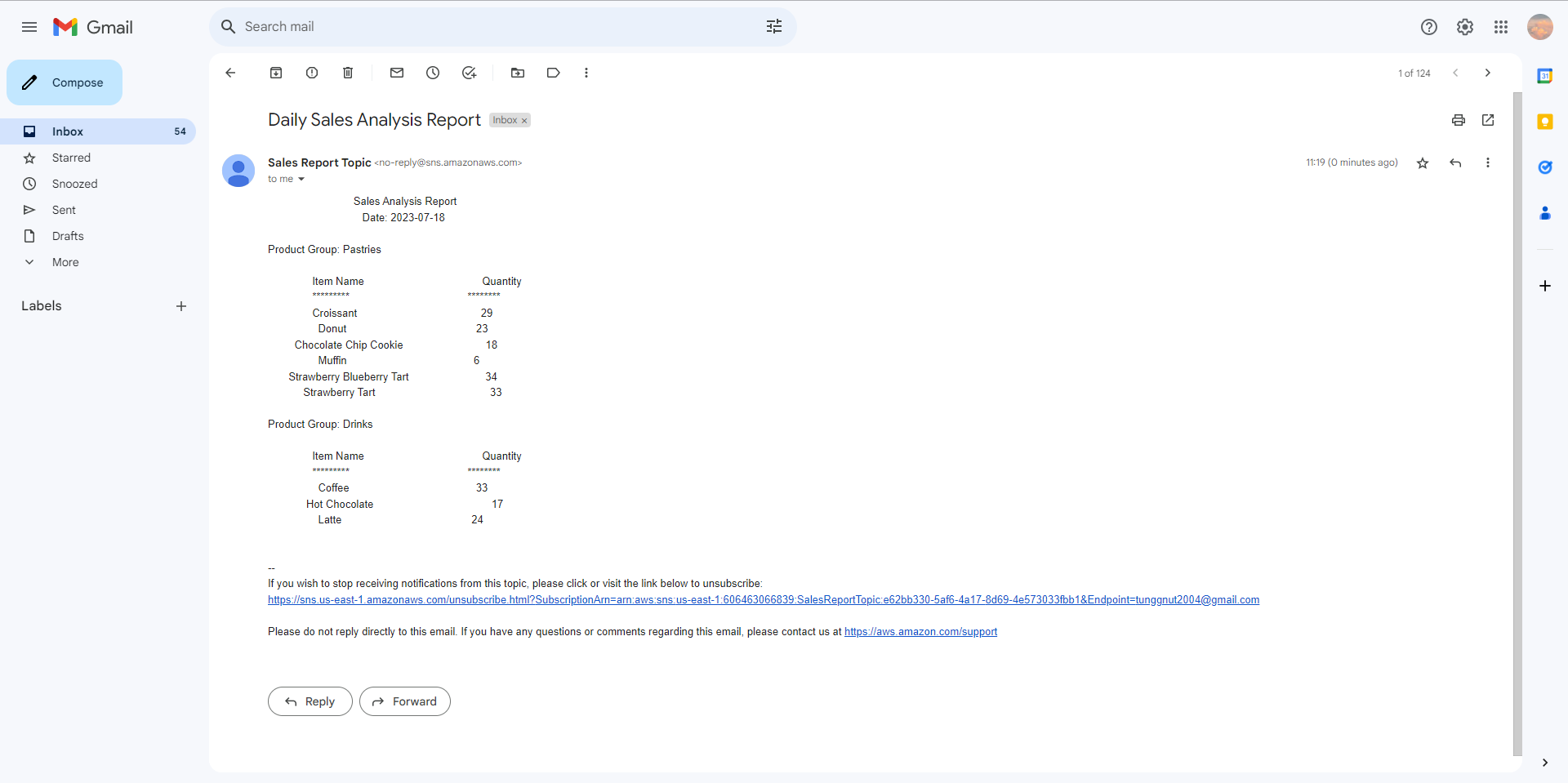
**Task 6 - Testing the salesAnalysisReport Lambda function**

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Create a test event for the Analysis Report function.

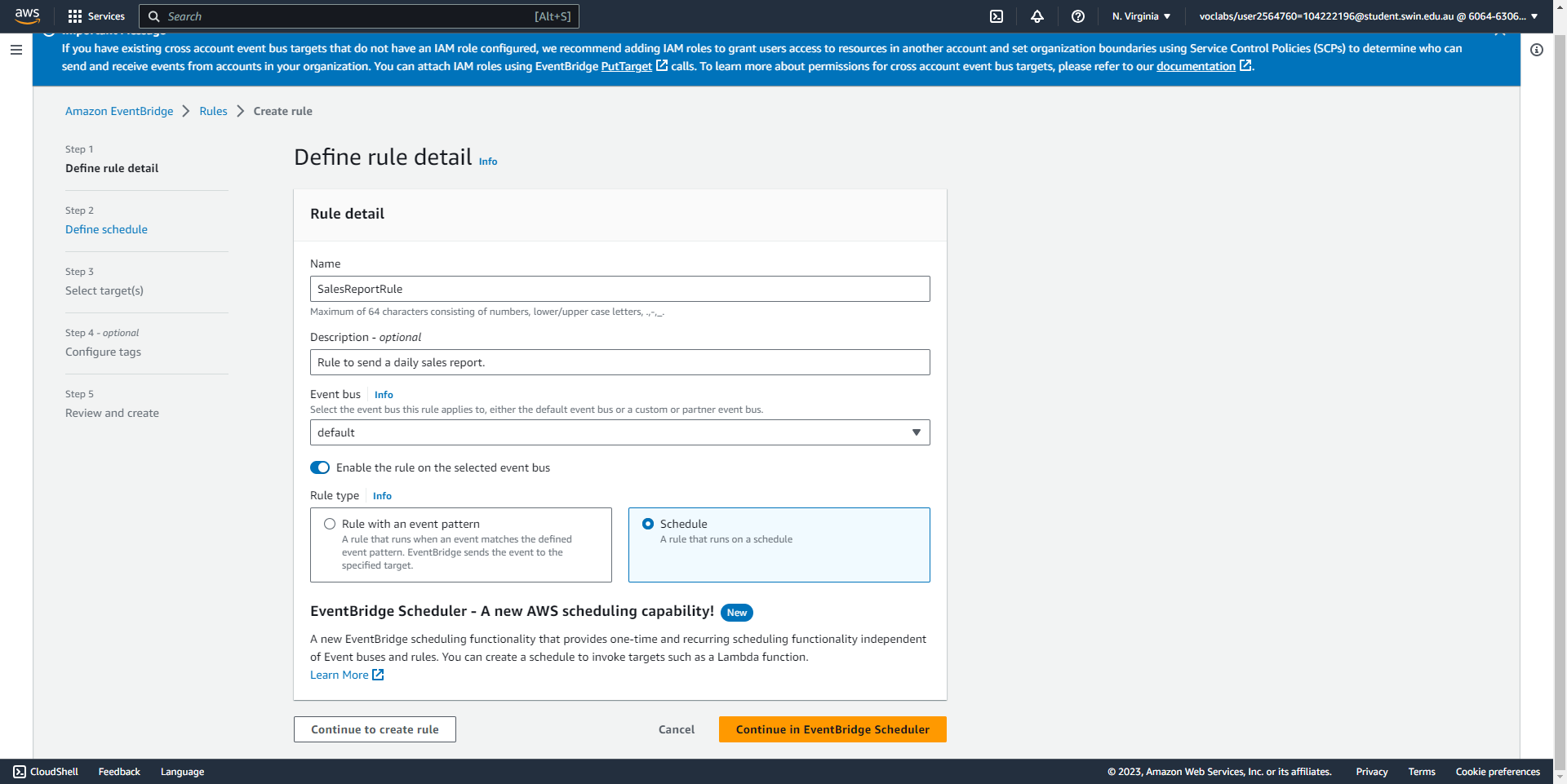
****

Successfully run the test event.

****

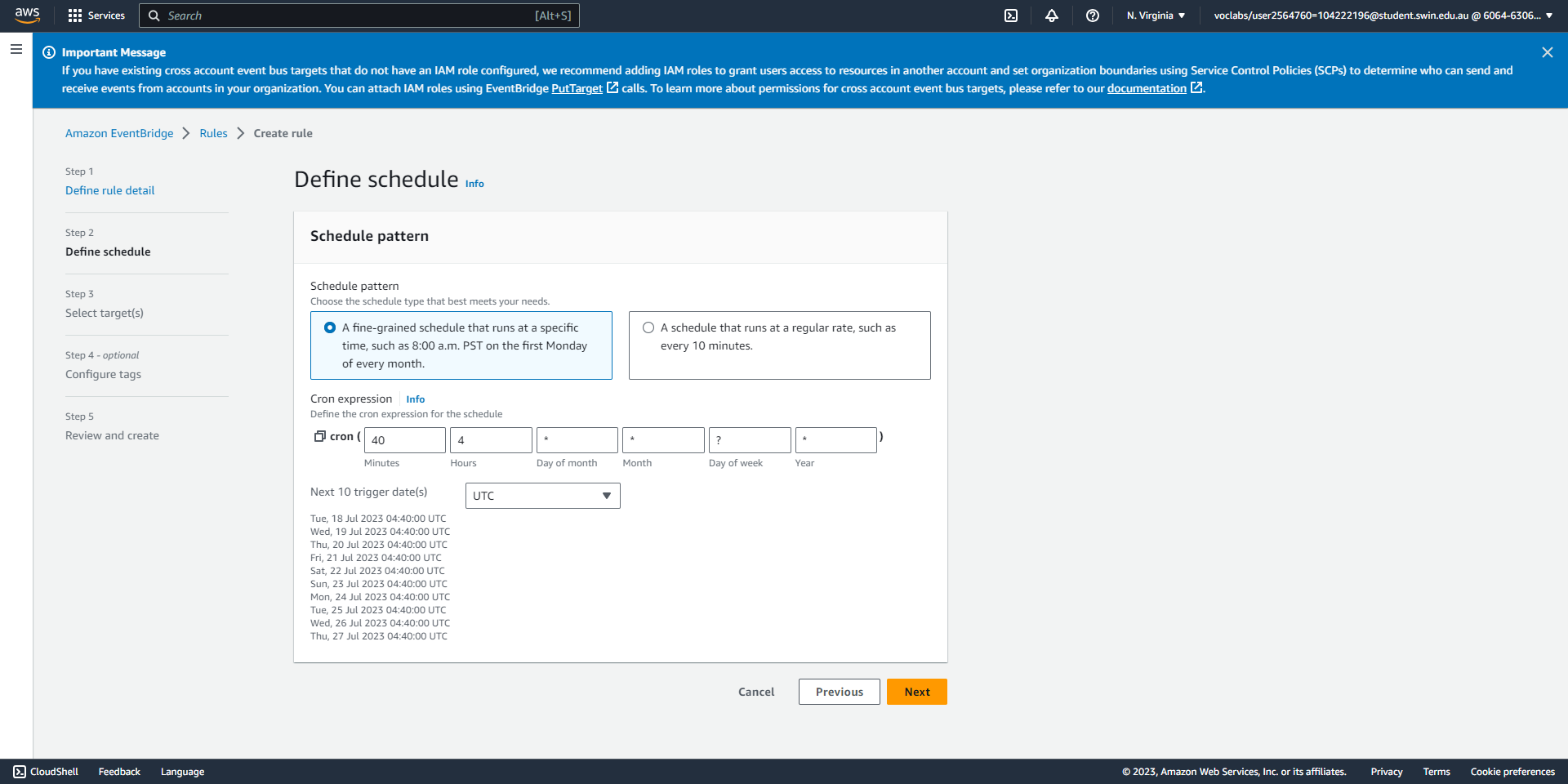
An email report is sent to the subscription email.

**Task 7 - Setting up an Amazon EventBridge event to trigger the Lambda function each day**

****

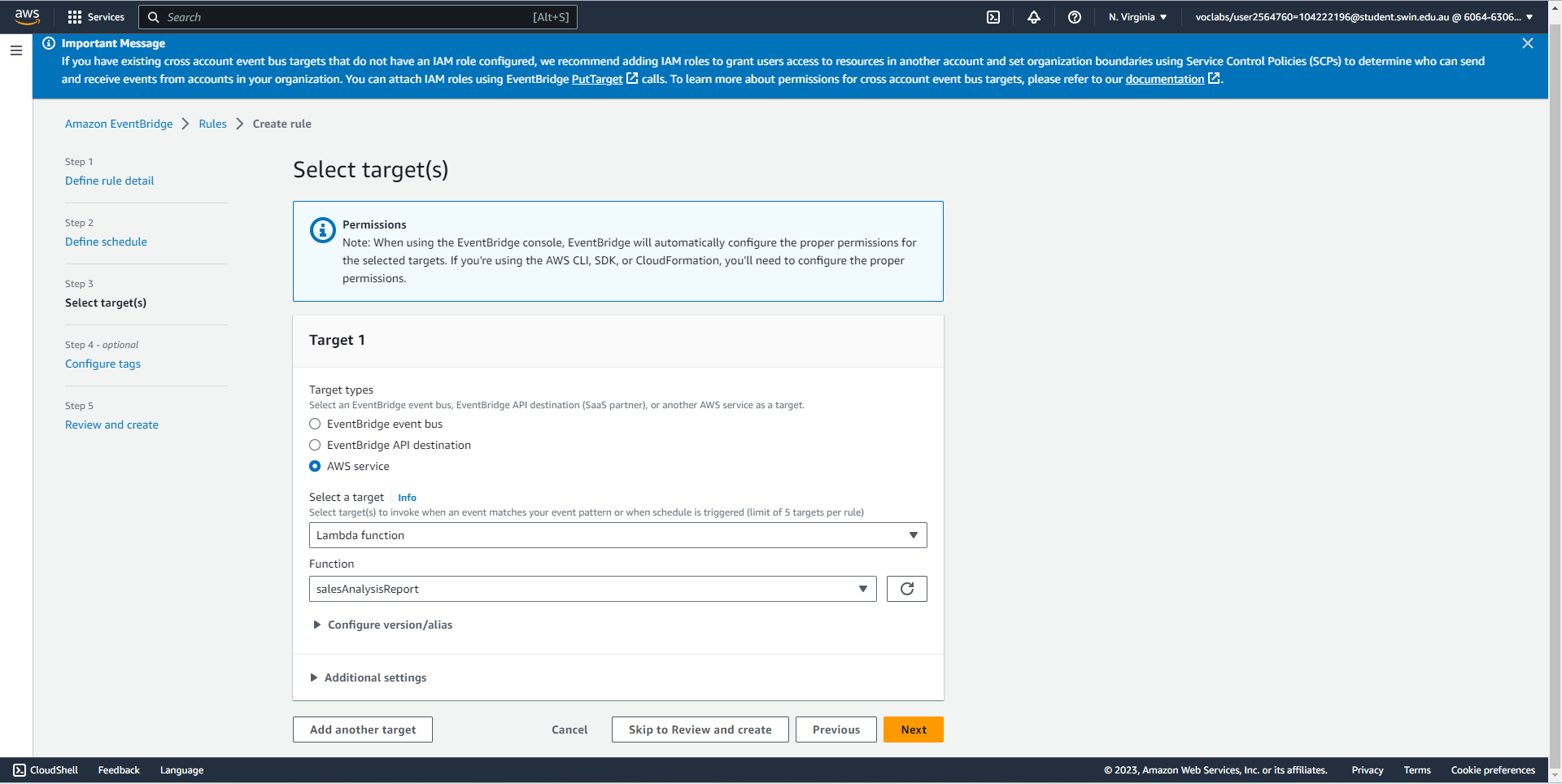


Create an EventBridge event (part 1/3), specifying the name, description, and rule type.

****

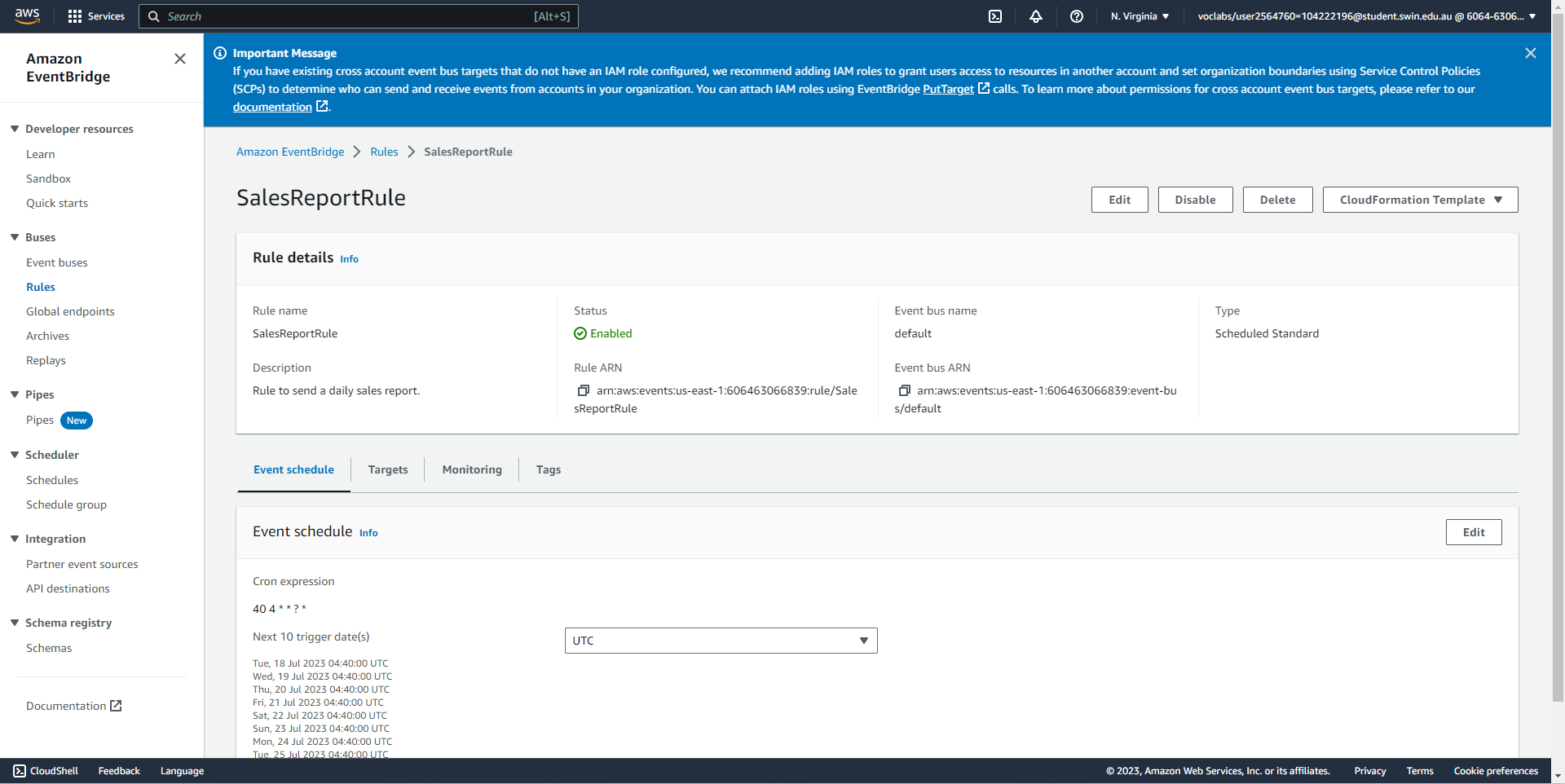


Create an EventBridge event (part 2/3), specifying the schedule pattern with a cron expression that triggers the event at 04:40 A.M. (UTC) every morning.

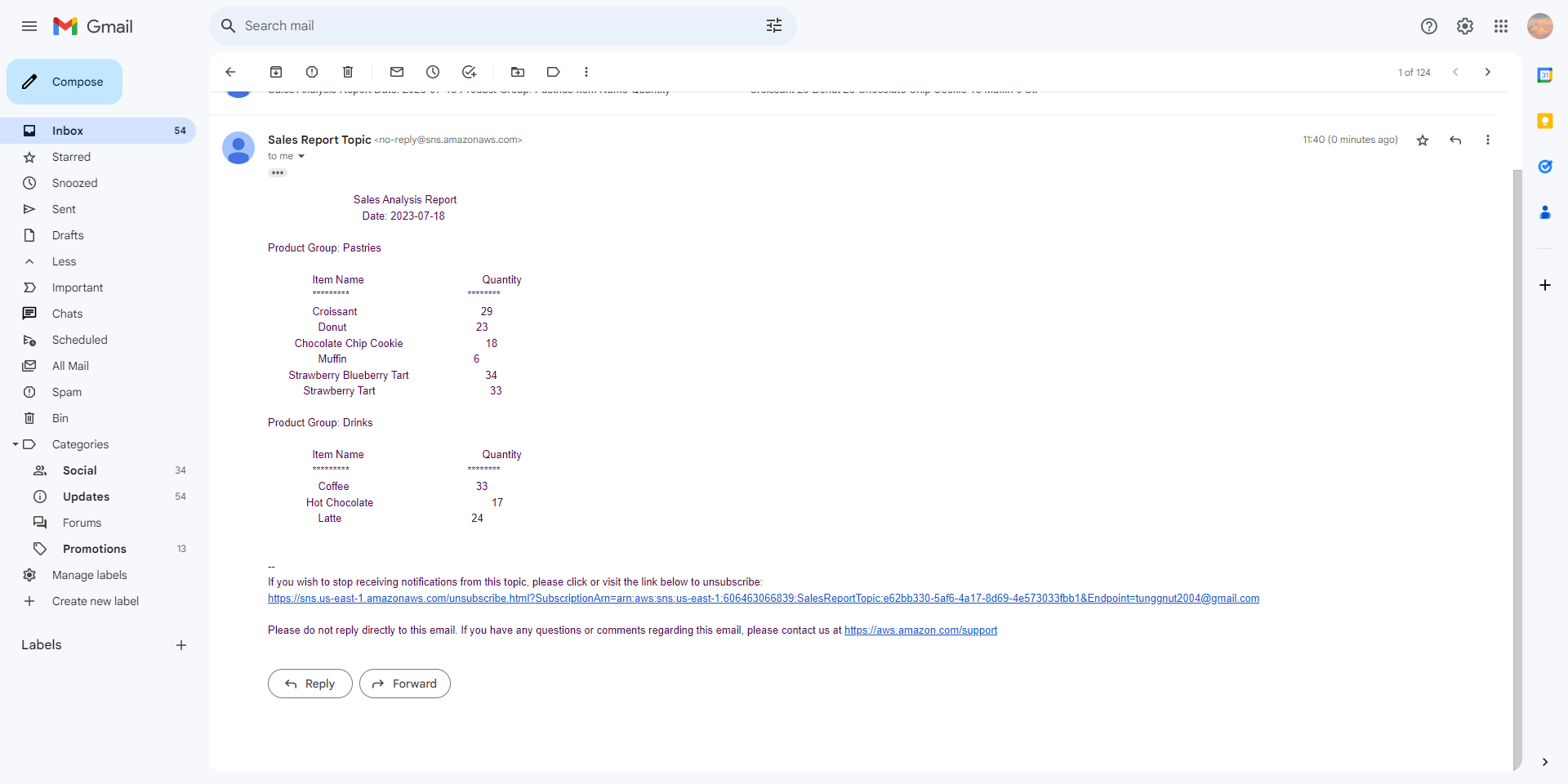
****



Create an EventBridge event (part 3/3), specifying the target of the event, which is the Lambda function.

****

The EventBridge event has been successfully created.

****



At 04:40 UTC (which is 11:40 GMT+7 in the email), the subscription email receives an email report as expected.