DIT 637 Smart and Secure Systems

TT10: Comprehensive Technology Tools

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Learning Outcomes

- Use everything we've learned throughout the course to get a development project started for a small team.

Background

For this final TT you will have several tasks that you must complete based off this story using the AWS CLI.

You are part of "SomeCompany" a growing tech start-up. You are starting a new project with a team of four:

Joanne

Annamaria

Nzinga

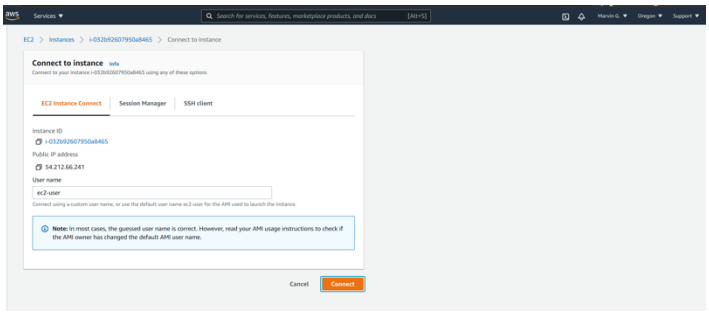
ZhangHe

References

https://docs.aws.amazon.com/

Step 1: Log onto your Amazon EC2 Instance

Log onto your Amazon EC2 instance using either OpenSSH, Putty, or from the AWS Management Console using 'EC2 Instance Connect' (shown below). Note all IP addresses used in this series of Technology Tools will be released by the time we start class.



If you receive an error that you must first set your AWS Region and configure your AWS CLI, please follow TT03A, step 3.

Remember, do not use your root *account* for these operations. You should be using another IAM user. You should not have access keys to your root account.

Step 2: Create the Users and groups

Create the following users

Joanne -- Development

Annamaria -- Tester

Nzinga -- Tester

ZhangHe – Development, Admin

SCREENSHOT of Created Users

They will all need passwords, and they must be required to reset the passwords. Joanne and ZhangHe are developers so they will need Access Keys.

SCREENSHOT of IAM Console user page "Access Key Age" column

Step 3: Create Groups

Create 3 groups with the following permissions

Then take **SCREENSHOTS** of each group and its permissions.
Development

- Amazon S3 Full Access
- Amazon SNS Full Access
- Amazon SQS Full Access
- Amazon EC2 Full Access
- Amazon DynamoDB Full Access

Tester

- Amazon S3 Read Only
- Amazon EC2 Read Only
- Amazon DynamoDB Read Only
- Amazon SNS Read Only

Admin

- Administrator Access

Add the users to the correct groups, use the CLI to show the correct users are in each group, and take **SCREENSHOT.**

Step 4: Amazon EC2

Create an Amazon EC2 instance that is running Amazon Linux 2, that is a T2.Micro with the tags
Name: Development
Webserver: Apache

Create an Amazon EC2 instance that is running Amazon Linux 2, that is a T2.Micro with the tags
Name: Test
Webserver: Database

Step 5: S3

Create an S3 bucket with a Unique name for the Developers that has “Development” in the name.

Attach a SCREENSHOT of the bucket creation output

Create an S3 bucket with a Unique name for the Test that has “Test” in the name.

Attach a SCREENSHOT of the bucket creation output

Step 6: DynamoDB

Create a DynamoDB Table

With the name “OurAwesomeProject”
With the attributes:

Name (string)

Date (string)

Tested (Boolean)

The partition key will use the NAME attribute

The sort key will use the DATE attribute

Take a **SCREENSHOT** of the describe-table output.

Step 7: Cleanup

Use the AWS CLI to delete the following resources

DynamoDB table

2 S3 buckets we created

Terminate the EC2 instances

Delete the 3 groups

Delete the two developers access keys **TAKE A SCREENSHOT TO CONFIRM**

Delete the 4 users

Push your work into GitHub

Save your screenshots to the submission file and push it to GitHub.
Follow the instructions on the CityU STC TA Center Github.io Submit your work page.