

Module 10 Guided Lab - Automating Infrastructure Deployment with AWS CloudFormation

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Task 1: Deploying a networking layer

The screenshot shows the AWS CloudFormation console's 'Create stack' wizard. The left sidebar indicates the current step is 'Step 1: Create stack'. The main panel is titled 'Prerequisite - Prepare template'. It contains three options: 'Template is ready' (selected), 'Use a sample template', and 'Create template in Designer'. Below this, the 'Specify template' section explains that a template is a JSON or YAML file. It offers two ways to specify the template source: 'Amazon S3 URL' or 'Upload a template file'. The 'Upload a template file' option is selected, and a file named 'AWS-TemplateFormatVersion-2010-09-09.txt' is shown. The S3 URL is also displayed at the bottom.

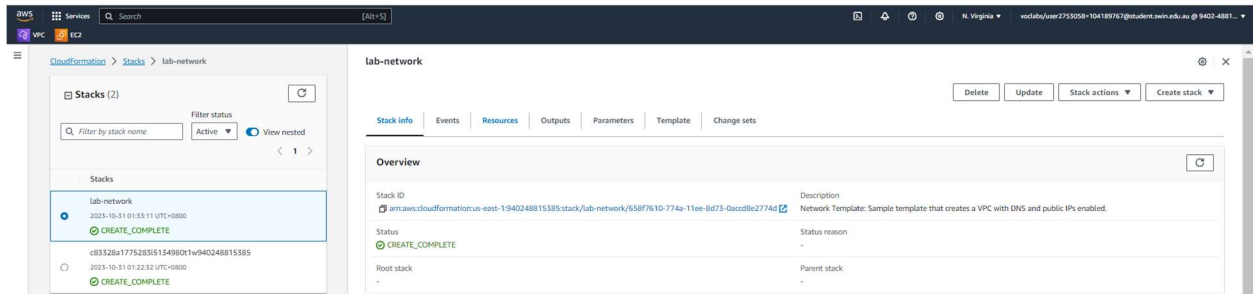
I create specify template with the template downloaded

The screenshot shows the 'Specify stack details' step of the 'Create stack' wizard. The left sidebar indicates the current step is 'Step 2: Specify stack details'. The main panel is titled 'Specify stack details' and contains a 'Stack name' field. The field is filled with the text 'lab-network'. Below the field, a note states: 'Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-)'.

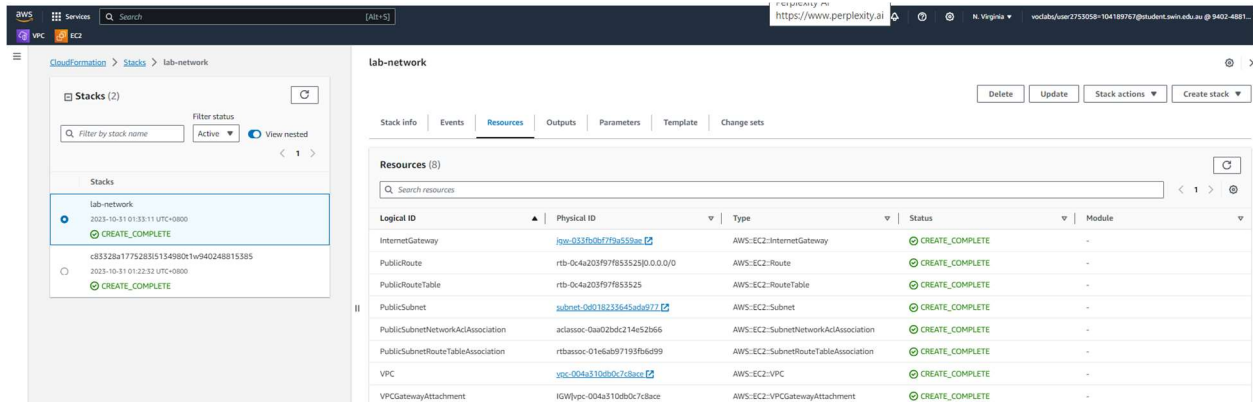
Specify stack details with adding stack name(Lab-network)

The screenshot shows the 'Configure stack options' step of the 'Create stack' wizard. The left sidebar indicates the current step is 'Step 3: Configure stack options'. The main panel is titled 'Configure stack options' and contains a 'Tags' section. It explains that tags are key-value pairs applied to resources. There is a table with two columns: 'Key' and 'Value - optional'. The 'Key' column contains 'application' and the 'Value' column contains 'inventory'. There is an 'Add new tag' button and a 'Remove' button.

Configure stack options with tags (Key: application , Value: inventory)

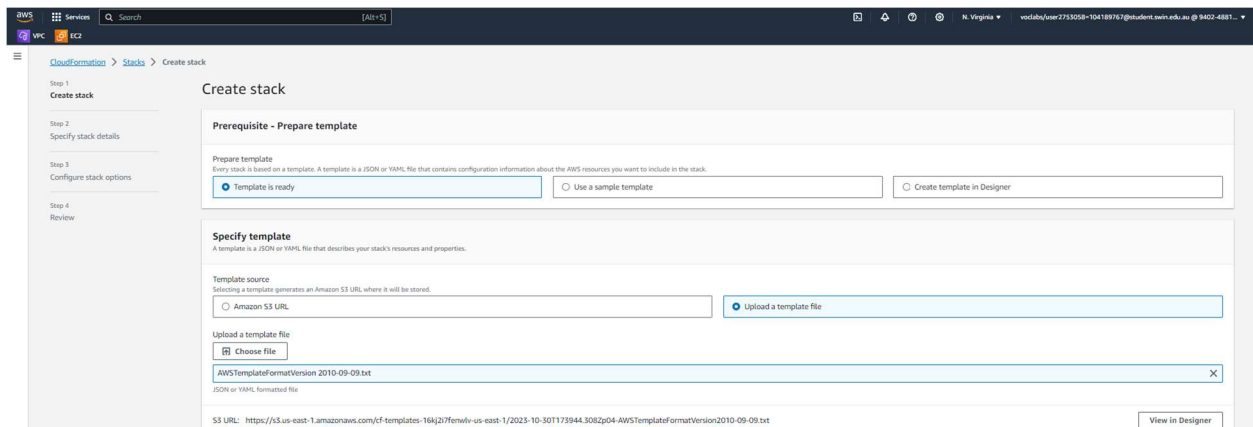


The Stack info status is CREATE_COMPLETE



The resources are CREATE_COMPLETE

Task 2: Deploying an application layer



I create specify template with template file (Lab-application.yaml)

The screenshot shows the 'Specify stack details' step in the AWS CloudFormation console. The 'Stack name' field contains 'lab-application' and the 'NetworkStackName' field contains 'lab-network'. The 'Parameters' section is empty.

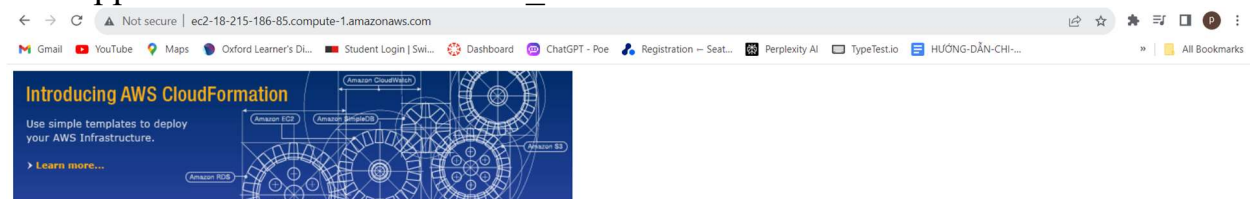
I create stack name as lab-application and NetworkStackName as lab-network

The screenshot shows the 'Configure stack options' step in the AWS CloudFormation console. The 'Tags' section shows a key-value pair with key 'application' and value 'inventory'.

Configure stack options with key as “application” and value as “inventory”

The screenshot shows the 'lab-application' stack in the AWS CloudFormation console. The stack status is 'CREATE_COMPLETE' and the stack is active. The 'Overview' section shows the stack ID and a description of the application template.

Lab-application status is CREATE_COMPLETE



Congratulations, you have successfully launched the AWS CloudFormation sample.

The browser can run application

Task 3: Updating a Stack

Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
-	sg-0b365a195ba40b...	IPv4	HTTP	TCP	80	0.0.0.0/0	-

1 inbound rules in the Security Group

Update stack

Prerequisite - Prepare template

Prepare template
Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.

☐ Use current template ☒ Replace current template ☐ Edit template in designer

Specify template

A template is a JSON or YAML file that describes your stack's resources and properties.

Template source
Selecting a template generates an Amazon S3 URL where it will be stored.

☐ Amazon S3 URL ☒ Upload a template file

Upload a template file
Choose file

AWS::Template::FormatVersion 2010-09-09.txt

JSON or YAML formatted file

S3 URL: https://s3.us-east-1.amazonaws.com/cf-templates-164j27ferwlv-us-east-1/2023-10-30T175008.696Zv6-AWS::Template::FormatVersion2010-09-09.txt

I replace template file from lab-application.yaml to lab-application2.yaml

Action	Logical ID	Physical ID	Resource type	Replacement	Module	Hook invocations
Replace	WebServerSecurityGroup	sg-071bc663a195ba40b	AWS::EC2::SecurityGroup	False	-	-

The change set preview

lab-application

Stack info | Events | Resources | Outputs | Parameters | Template | Change sets

Overview

Stack ID: arn:aws:cloudformation:us-east-1:940248815385:stack/lab-application/c778a850-774b-11ea-bb49-1239a2202e4f

Description: Application Template: Demonstrates how to reference resources from a different stack. This template provisions an EC2 instance in a VPC Subnet provisioned in a different stack.

Status: UPDATE_COMPLETE

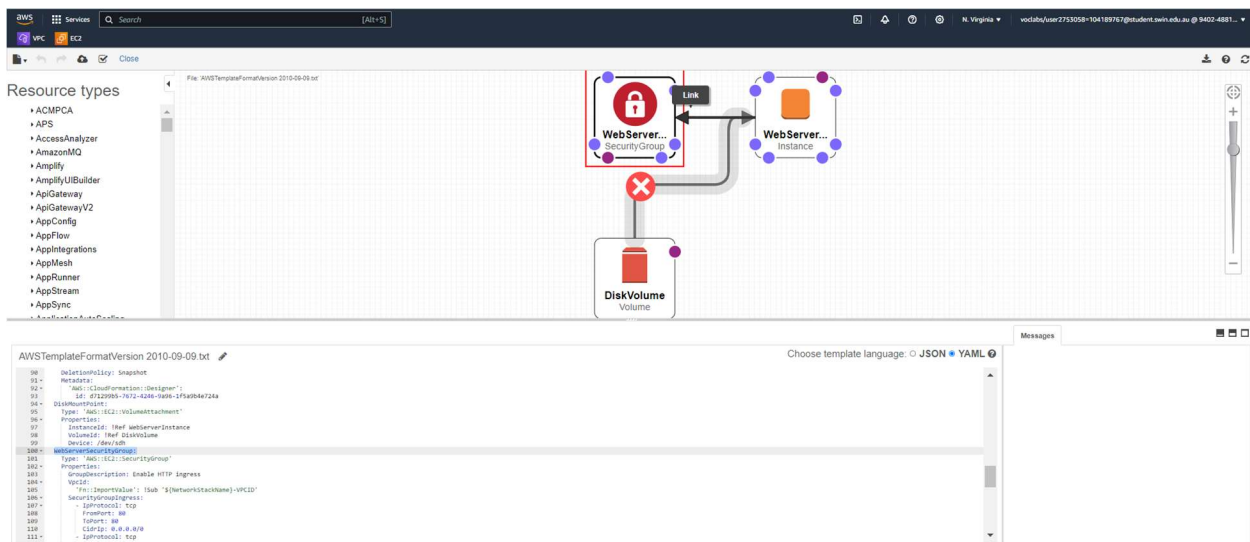
Status reason: -

The update status is UPDATE_COMPLETE



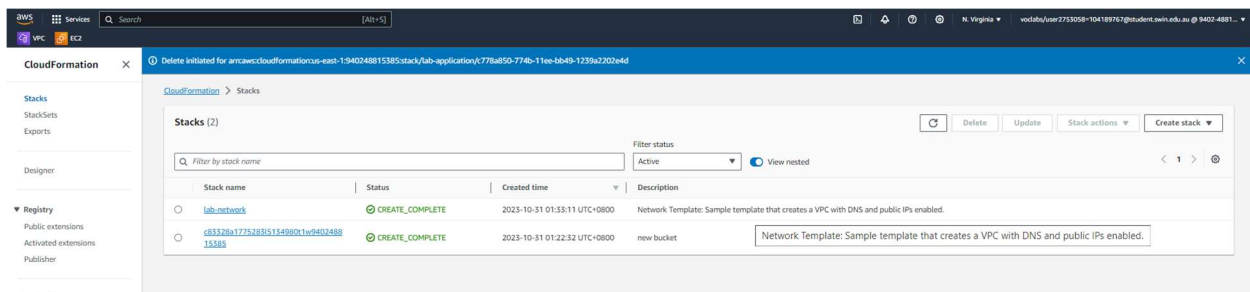
Inbound rules has additional rule that allow SSH traffic over TCP port 22

Task 4: Exploring templates with AWS CloudFormation Designer

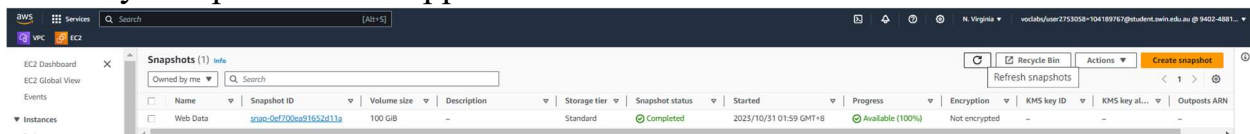


The design template of lab-application2.yaml

Task 5: Deleting the stack



I already complete the lab-application



The snapshot