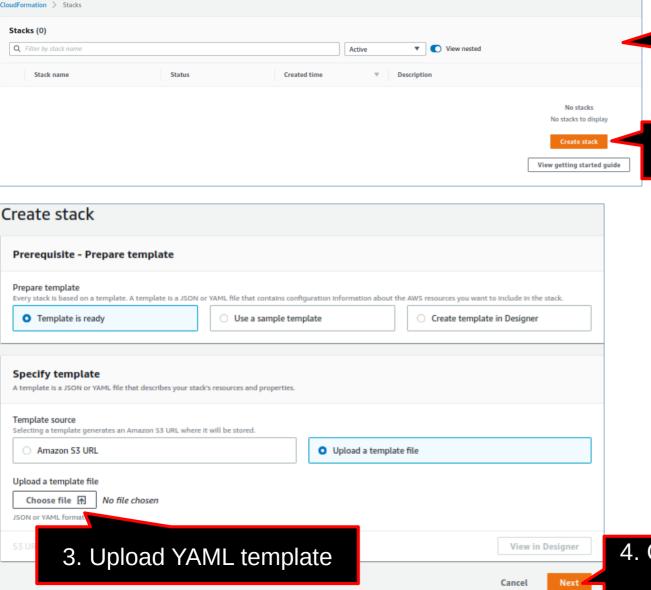
#### Module-7 Assignment – 2 Cloudformation

#### You have been asked to:

- 1. Create a template with 1 VPC and 1 Public Subnet
- 2. Launch an Amazon Linux EC2 instance in the public subnet and tag the instance as "CFinstance"



 Open cloudformation in AWS console

2. Click on Create stack

4. Click Next and Finish all steps to create stack and verify

#### YAML Preamble

AWSTemplateFormatVersion: 2010-09-09

Description: "Module 7 Assignment 2 - YAML file to create a VPC, 1 public subnet, and an Amazon Linux EC2 instance, named CFInstance, in the public subnet."

#### VPC YAML

```
Resources:
#VPC
 m7a2vpc:
    Type: 'AWS::EC2::VPC'
    Properties:
      CidrBlock: 10.0.0.0/16
      InstanceTenancy: Default
      Tags:
        - Key: Name
          Value: m7a2vpc
        - Key: CreatedBy
          Value: Hariharan Narayanan
```

## Public Subnet YAML

```
#Public Subnet
 m7a2publicsubnet:
    Type: 'AWS::EC2::Subnet'
    Properties:
     VpcId:
        Ref: m7a2vpc
     CidrBlock: 10.0.1.0/24
     AvailabilityZone: "us-east-1a"
     MapPublicIpOnLaunch: true # Map a public IP on launch since this is a public subnet
      Tags:
        - Key: Name
          Value: m7a2publicsubnet
        - Key: CreatedBy
          Value: Hariharan Narayanan
```

## Public Route Table YAML

```
#Public route table
 m7a2publicroutetable:
    Type: AWS::EC2::RouteTable
    Properties:
      VpcId:
        Ref: m7a2vpc
      Tags:
        - Key: Name
          Value: m7a2publicroutetable
        - Key: CreatedBy
          Value: Hariharan Narayanan
```

#### Attach route table to subnet - YAML

```
#Attach public route table to public subnet
  m7a2attachpublicrttosubnet:
    Type: AWS::EC2::SubnetRouteTableAssociation
    Properties:
      Subnet Id:
        Ref: m7a2publicsubnet
      RouteTableId:
        Ref: m7a2publicroutetable
```

# Internet gateway YAML

```
#Internet gateway
  m7a2internetqw:
    Type: 'AWS::EC2::InternetGateway'
    Properties:
        Tags:
        - Key: Name
          Value: m7a2internetgw
        - Key: CreatedBy
          Value: Hariharan Narayanan
```

## Attach internet gateway to VPC - YAML

```
#Attach internet gateway to vpc
  m7a2attachigwtovpc:
    Type: AWS::EC2::VPCGatewayAttachment
    Properties:
      VpcId:
         Ref: m7a2vpc
      InternetGatewayId:
         Ref: m7a2internetgw
```

#### Route entry in public route table - YAML

#Route entry in public route table for instances in the public subnet to reach the Internet and vice-versa.

m7a2publicroutetableroute:

Type: AWS::EC2::Route

Properties:

DestinationCidrBlock: 0.0.0.0/0

GatewayId: m7a2internetgw

RouteTableId: m7a2publicroutetable

#### EC2 instance YAML

```
#Route entry in public route table for instances in the public subnet to reach the Internet and vice-versa.
 m7a2publicroutetableroute:
   Type: AWS::EC2::Route
   Properties:
     DestinationCidrBlock: 0.0.0.0/0
     GatewayId: m7a2internetgw
     RouteTableId: m7a2publicroutetable
#Create an EC2 instance of Aazon Linux called CFinstance in the public subnet
 CFinstance:
    Type: AWS::EC2::Instance
   Properties:
     AvailabilityZone: "us-east-1a"
     ImageId: "ami-08e4e35cccc6189f4"
     InstanceType: "t3.micro"
     KeyName: "hariharan_aws_us_east_1"
     SubnetId:
       Ref: m7a2publicsubnet
     Tags:
       - Key: Name
         Value: CFinstance
       - Key: CreatedBy
         Value: Hariharan Narayanan
```