

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”

Stacks (0)

Filter by stack name Active

Stack name	Status	Created time	Description
No stacks No stacks to display			

1. Open cloudformation in AWS console

2. Click on Create stack

Create 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.

☒ Template is ready

☐ Use a sample template

☐ Create 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

No file chosen

JSON or YAML format

3. Upload YAML template

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:
    SubnetId:
      Ref: m7a2publicsubnet
    RouteTableId:
      Ref: m7a2publicroutetable
```

Internet gateway YAML

```
#Internet gateway
```

```
  m7a2internetgw:
```

```
    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.
```

```
  m7a2publicroutetable:route:
```

```
    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
```