**Cloud Formation**

1. Create IAM Role And Attach Following Policies To Role.

# [AmazonEC2FullAccess](https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/policies/details/arn%3Aaws%3Aiam%3A%3Aaws%3Apolicy%2FAmazonEC2FullAccess) [AmazonS3FullAccess](https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/policies/details/arn%3Aaws%3Aiam%3A%3Aaws%3Apolicy%2FAmazonS3FullAccess) [AWSCloudFormationFullAccess](https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/policies/details/arn%3Aaws%3Aiam%3A%3Aaws%3Apolicy%2FAWSCloudFormationFullAccess) [SSM\_Policy](https://us-east-1.console.aws.amazon.com/iam/home?region=us-east-1#/roles/details/Cloud_formation/editPolicy/SSM_Policy?step=addPermissions)

# SSM Policy Code

{

"Version": "2012-10-17",

"Statement": [

{

"Effect": "Allow",

"Action": [

"ssm:GetParameter",

"ssm:GetParameters",

"ssm:GetParametersByPath"

],

"Resource": "arn:aws:ssm:us-east-1::parameter/aws/service/ami-amazon-linux-latest/amzn2-ami-hvm-x86\_64-gp2"

}

]

}

# Open Aws Cloud Formation And Click On Create Stack

# Select Build from Infrastructure Composer

# Then Click On “create in Infrastructure Composer”>template >yaml > Paste Code.

AWSTemplateFormatVersion: 2010-09-09

Description: CloudFormation Template for WebServer with Security Group and EC2 Instance

Parameters:

LatestAmiId:

Description: The latest Amazon Linux 2 AMI from the Parameter Store

Type: 'AWS::SSM::Parameter::Value<AWS::EC2::Image::Id>'

Default: '/aws/service/ami-amazon-linux-latest/amzn2-ami-hvm-x86\_64-gp2'

InstanceType:

Description: WebServer EC2 instance type

Type: String

Default: t2.micro

AllowedValues:

- t3.micro

- t2.micro

ConstraintDescription: must be a valid EC2 instance type.

MyIP:

Description: Your IP address in CIDR format (e.g. 203.0.113.1/32).

Type: String

MinLength: '9'

MaxLength: '18'

Default: 0.0.0.0/0

AllowedPattern: '^(\d{1,3}\.){3}\d{1,3}\/\d{1,2}$'

ConstraintDescription: must be a valid IP CIDR range of the form x.x.x.x/x.

Resources:

WebServerSecurityGroup:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Allow HTTP access via my IP address

SecurityGroupIngress:

- IpProtocol: tcp

FromPort: 80

ToPort: 80

CidrIp: !Ref MyIP

WebServer:

Type: AWS::EC2::Instance

Properties:

ImageId: !Ref LatestAmiId

InstanceType: !Ref InstanceType

SecurityGroupIds:

- !Ref WebServerSecurityGroup

UserData: !Base64 |

#!/bin/bash

yum update -y

yum install -y httpd

systemctl start httpd

systemctl enable httpd

echo "<html><body><h1>Hello World!</h1></body></html>" > /var/www/html/index.html

Outputs:

WebsiteURL:

Value: !Join

- ''

- - http://

- !GetAtt WebServer.PublicDnsName

Description: Website URL

# Set Stack Name > Other Default >Next

# Select IAM Role in Permission > Default >Next >Scroll Down >Submit

# Check Ec2 Dashboard And Security Group There Are Added New Group & Instance.

# 