1. On your AWS Management Console, Search for Cloud Formation. Under stacks, click on Create Stack.

A screenshot of a computer

Description automatically generated

1. After clicking Create Stack, fill in the pre requisite to prepare a template, upload/reuse a template.

A screenshot of a computer

Description automatically generated

1. Specify the Stack Details, like naming the template, providing the required parameters.

A screenshot of a computer

Description automatically generated

1. Configure other stack options (if needed), otherwise leave it on default.

A screenshot of a computer

Description automatically generated

1. Review the information and create stackA screenshot of a computer

   Description automatically generated
2. Output screenshot.

A screenshot of a computer

Description automatically generated

1. Output of Web Server 1 (Served from LoadBalancer Public DNS, PublicDNSServerFive in above screenshot)

A screenshot of a computer

Description automatically generated

1. Output of Web Server 2 (Served from LoadBalancer Public DNS, PublicDNSServerFive in above screenshot)

A screenshot of a computer

Description automatically generated

1. Output of Web Server 3 (Served from LoadBalancer Public DNS, PublicDNSServerFive in above screenshot)

A screenshot of a computer

Description automatically generated

1. Output of Web Server 4 (Served from LoadBalancer Public DNS, PublicDNSServerFive in above screenshot)

A screenshot of a computer

Description automatically generated

1. Screenshots of EC2 instance launched.

A screenshot of a computer

Description automatically generated

1. Commands executed on LoadBalancer instance to configure a load balancer.

A computer screen shot of a black screen

Description automatically generated

EC2-CloudFormation Template:

{

"AWSTemplateFormatVersion": "2010-09-09",

"Description": "Template for launching an Amazon EC2 instance",

"Parameters": {

"KeyName": {

"Description": "Name of EC2 instance",

"Type": "AWS::EC2::KeyPair::KeyName",

"ConstraintDescription": "must be the name of an existing EC2 KeyPair."

},

"InstanceType": {

"Description": "EC2 instance",

"Type": "String",

"Default": "t2.micro",

"AllowedValues": [

"t2.micro"

],

"ConstraintDescription": "must be a valid EC2 instance type."

}

},

"Resources": {

"EC2Instance1": {

"Type": "AWS::EC2::Instance",

"Properties": {

"InstanceType": {

"Ref": "InstanceType"

},

"SecurityGroups": [

"launch-wizard-2"

],

"KeyName": {

"Ref": "KeyName"

},

"Tags": [

{

"Key": "Name",

"Value": "Server1"

}

]

,

"ImageId": "ami-0900fe555666598a2",

"UserData": "IyFiaW4vYmFzaApkbmYgaW5zdGFsbCBuZ2lueCAteQpleHBvcnQgSE9TVE5BTUU9JChob3N0bmFtZSAtZikKc2VkIC1pICJzL1dlbGNvbWUgdG8gbmdpbngvT3dhaXMgTmdpbnggU2VydmVyOiAkSE9TVE5BTUUvZyIgL3Vzci9zaGFyZS9uZ2lueC9odG1sL2luZGV4Lmh0bWwKc3lzdGVtY3RsIHN0YXJ0IG5naW54CnN5c3RlbWN0bCBlbmFibGUgbmdpbng="

}

},

"EC2Instance2": {

"Type": "AWS::EC2::Instance",

"Properties": {

"InstanceType": {

"Ref": "InstanceType"

},

"SecurityGroups": [

"launch-wizard-2"

],

"KeyName": {

"Ref": "KeyName"

},

"Tags": [

{

"Key": "Name",

"Value": "Server2"

}

],

"ImageId": "ami-0900fe555666598a2",

"UserData": "IyFiaW4vYmFzaApkbmYgaW5zdGFsbCBuZ2lueCAteQpleHBvcnQgSE9TVE5BTUU9JChob3N0bmFtZSAtZikKc2VkIC1pICJzL1dlbGNvbWUgdG8gbmdpbngvT3dhaXMgTmdpbnggU2VydmVyOiAkSE9TVE5BTUUvZyIgL3Vzci9zaGFyZS9uZ2lueC9odG1sL2luZGV4Lmh0bWwKc3lzdGVtY3RsIHN0YXJ0IG5naW54CnN5c3RlbWN0bCBlbmFibGUgbmdpbng="

}

},

"EC2Instance3": {

"Type": "AWS::EC2::Instance",

"Properties": {

"InstanceType": {

"Ref": "InstanceType"

},

"SecurityGroups": [

"launch-wizard-2"

],

"KeyName": {

"Ref": "KeyName"

},

"Tags": [

{

"Key": "Name",

"Value": "Server3"

}

],

"ImageId": "ami-0900fe555666598a2",

"UserData": "IyFiaW4vYmFzaApkbmYgaW5zdGFsbCBuZ2lueCAteQpleHBvcnQgSE9TVE5BTUU9JChob3N0bmFtZSAtZikKc2VkIC1pICJzL1dlbGNvbWUgdG8gbmdpbngvT3dhaXMgTmdpbnggU2VydmVyOiAkSE9TVE5BTUUvZyIgL3Vzci9zaGFyZS9uZ2lueC9odG1sL2luZGV4Lmh0bWwKc3lzdGVtY3RsIHN0YXJ0IG5naW54CnN5c3RlbWN0bCBlbmFibGUgbmdpbng="

}

},

"EC2Instance4": {

"Type": "AWS::EC2::Instance",

"Properties": {

"InstanceType": {

"Ref": "InstanceType"

},

"SecurityGroups": [

"launch-wizard-2"

],

"KeyName": {

"Ref": "KeyName"

},

"Tags": [

{

"Key": "Name",

"Value": "Server4"

}

],

"ImageId": "ami-0900fe555666598a2",

"UserData": "IyFiaW4vYmFzaApkbmYgaW5zdGFsbCBuZ2lueCAteQpleHBvcnQgSE9TVE5BTUU9JChob3N0bmFtZSAtZikKc2VkIC1pICJzL1dlbGNvbWUgdG8gbmdpbngvT3dhaXMgTmdpbnggU2VydmVyOiAkSE9TVE5BTUUvZyIgL3Vzci9zaGFyZS9uZ2lueC9odG1sL2luZGV4Lmh0bWwKc3lzdGVtY3RsIHN0YXJ0IG5naW54CnN5c3RlbWN0bCBlbmFibGUgbmdpbng="

}

},

"EC2Instance5": {

"Type": "AWS::EC2::Instance",

"Properties": {

"InstanceType": {

"Ref": "InstanceType"

},

"SecurityGroups": [

"launch-wizard-2"

],

"KeyName": {

"Ref": "KeyName"

},

"Tags": [

{

"Key": "Name",

"Value": "LoadBalancer"

}

],

"ImageId": "ami-0900fe555666598a2"

}

}

},

"Outputs": {

"PublicDNSServerOne": {

"Description": "Public DNSName of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance1",

"PublicDnsName"

]

}

},

"PublicIPServerOne": {

"Description": "Public IP address of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance1",

"PublicIp"

]

}

},

"PublicDNSServerTwo": {

"Description": "Public DNSName of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance2",

"PublicDnsName"

]

}

},

"PublicIPServerTwo": {

"Description": "Public IP address of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance2",

"PublicIp"

]

}

},

"PublicDNSServerThree": {

"Description": "Public DNSName of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance3",

"PublicDnsName"

]

}

},

"PublicIPServerThree": {

"Description": "Public IP address of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance3",

"PublicIp"

]

}

},

"PublicDNSServerFour": {

"Description": "Public DNSName of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance4",

"PublicDnsName"

]

}

},

"PublicIPServerFour": {

"Description": "Public IP address of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance4",

"PublicIp"

]

}

},

"PublicDNSServerFive": {

"Description": "Public DNSName of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance5",

"PublicDnsName"

]

}

},

"PublicIPServerFive": {

"Description": "Public IP address of the newly created EC2 instance",

"Value": {

"Fn::GetAtt": [

"EC2Instance5",

"PublicIp"

]

}

}

}

}

UserData Script is mentioned in base64 encoded:

#!bin/bash

dnf install nginx -y

export HOSTNAME=$(hostname -f)

sed -i “s/Welcome to nginx/Owais Nginx $HOSTNAME/g” /usr/share/nginx/index.html

systemctl start nginx

systemctl enable nginx

HTML Code for website:

<!DOCTYPE html>

<html>

<head>

<title>Owais Nginx Server: ip-172-31-16-11.us-east-2.compute.internal!</title>

<style>

html {

color-scheme: light dark;

}

body {

width: 35em;

margin: 0 auto;

font-family: Tahoma, Verdana, Arial, sans-serif;

}

</style>

</head>

<body>

<h1>Owais Nginx Server: ip-172-31-16-11.us-east-2.compute.internal!</h1>

<p>If you see this page, the nginx web server is successfully installed and

working. Further configuration is required.</p>

<p>For online documentation and support please refer to

<a href="http://nginx.org/">nginx.org</a>.<br/>

Commercial support is available at

<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>

</body>

</html>