

Module 8: Case Study - 1

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Course Offered: -Advanced Cloud Computing and Devops

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Problem Statement:

You work for XYZ Corporation. Your corporation wants to launch a new web-based application. The development team has prepared the code but it is not tested yet. The development team needs the system admins to build a web server to test the code but the system admins are not available.

Tasks To Be Performed:

- 1. Web tier:** Launch an instance in a public subnet and that instance should allow HTTP and SSH from the internet.
- 2. Application tier:** Launch an instance in a private subnet of the web tier and it should allow only SSH from the public subnet of Web Tier-3.
- 3. DB tier:** Launch an RDS MYSQL instance in a private subnet and it should allow connection on port 3306 only from the private subnet of Application Tier-4.
4. Setup a Route 53 hosted zone and direct traffic to the EC2 instance.

You have been also asked to propose a solution so that:

1. Development team can test their code without having to involve the system admins and can invest their time in testing the code rather than provisioning, configuring and updating the resources needed to test the code.
2. Make sure when the development team deletes the stack, RDS DB instances should not be deleted.

ANSWER:

1. Web tier: Launch an instance in a public subnet and that instance should allow HTTP and SSH from the internet

```
WebTierInstance:
  Type: AWS::EC2::Instance
  Properties:
    InstanceType: t2.micro
    ImageId: !Ref AMI
    SubnetId: !Ref PublicSubnet1
    SecurityGroupIds:
      - !Ref WebTierSecurityGroup

WebTierSecurityGroup:
  Type: AWS::EC2::SecurityGroup
  Properties:
    GroupDescription: Allow HTTP and SSH from the internet
    VpcId: !Ref VPC
    SecurityGroupIngress:
      - IpProtocol: tcp
        FromPort: 80
        ToPort: 80
        CidrIp: 0.0.0.0/0
      - IpProtocol: tcp
        FromPort: 22
        ToPort: 22
        CidrIp: 0.0.0.0/0
```

2. Application tier: Launch an instance in a private subnet of the web tier and it should allow only SSH from the public subnet of Web Tier-3

```
ApplicationTierInstance:
  Type: AWS::EC2::Instance
  Properties:
    InstanceType: t2.micro
    ImageId: !Ref AMI
    SubnetId: !Ref PrivateSubnet1
    SecurityGroupIds:
      - !Ref ApplicationTierSecurityGroup

ApplicationTierSecurityGroup:
  Type: AWS::EC2::SecurityGroup
  Properties:
    GroupDescription: Allow SSH from Web Tier
    VpcId: !Ref VPC
    SecurityGroupIngress:
      - IpProtocol: tcp
        FromPort: 22
        ToPort: 22
        SourceSecurityGroupId: !Ref WebTierSecurityGroup
```

3. DB tier: Launch an RDS MYSQL instance in a private subnet and it should allow connection on port 3306 only from the private subnet of Application Tier-4.

InstanceSecurityGroupDataBase:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Allow access to the database

VpcId: !Ref VPC

SecurityGroupIngress:

- IpProtocol: tcp

FromPort: 3306

ToPort: 3306

SourceSecurityGroupId: !Ref ApplicationTierSecurityGroup

RDSDBSubnetGroup:

Type: AWS::RDS::DBSubnetGroup

Properties:

DBSubnetGroupDescription: Subnet Group for RDS

SubnetIds:

- !Ref PrivateSubnet1

- !Ref PrivateSubnet2

```
RDSDBInstance:
  Type: AWS::RDS::DBInstance
  Properties:
    AllocatedStorage: 20
    AutoMinorVersionUpgrade: true
    DBInstanceClass: db.t3.micro
    DBInstanceIdentifier: !Ref DBName
    DBName: !Ref DBName
    Engine: MySQL
    EngineVersion: "8.0.33"
    MasterUsername: !Ref DBUsername
    MasterUserPassword: !Ref DBPassword
    PubliclyAccessible: false
    StorageType: gp3
    MultiAZ: false
    Port: "3306"
    StorageEncrypted: false
    CopyTagsToSnapshot: true
    EnableIAMDatabaseAuthentication: false
    VPCSecurityGroups:
      - !Ref InstanceSecurityGroupDataBase
    DBSubnetGroupName: !Ref RDSDBSubnetGroup
    DeletionProtection: false
    MaxAllocatedStorage: 1000
  Tags:
    - Key: Name
      Value: DBAssessment
    - Key: createdBy
      Value: Hitesh Chauhan
    - Key: Project
      Value: CloudFormationAssignment01
    - Key: Environment
      Value: Prod
```

4. Setup a Route 53 hosted zone and direct traffic to the EC2 instance.

```
HostedZone01:
  Type: AWS::Route53::HostedZone
  Properties:
    HostedZoneConfig:
      Comment: ""
      Name: xyzcorporation.com
    MyDNSRecord:
      Type: AWS::Route53::RecordSet
      Properties:
        HostedZoneId: !Ref HostedZone01
        Name: webtier3.xyzcorporation.com
        Type: A
        TTL: 300
        ResourceRecords:
          - !GetAtt WebTierInstance.PublicIp
```

Full Code:

```
Parameters:
  EnvironmentName:
    Description: An environment name that is prefixed to resource names
    Type: String

  #db
  DBInstanceClass:
    Description: RDS instance class
    Type: String
    Default: db.t2.micro
    AllowedValues:
      - db.t2.micro
      - db.t2.small
    ConstraintDescription: Must be a valid RDS instance class.

  DBName:
    Description: The name of the database
    Type: String
    Default: mydatabase

  DBUsername:
    Description: The database admin account username
    Type: String
    Default: admin

  DBPassword:
    Description: The database admin account password
    Type: String
    NoEcho: true

  #route53
  DomainName:
    Description: The domain name for the Route 53 hosted zone
    Type: String
    Default: xyzcorporation.com
```

HostedZone:

Type: String

Description: The DNS name of an existing Amazon Route 53 hosted zone

AMI:

Type: String

Description: AMI ID for the web and application tier instances

Default: ami-063d43db0594b521b

Resources:

VPC:

Type: AWS::EC2::VPC

Properties:

CidrBlock: 10.26.0.0/16

EnableDnsSupport: true

EnableDnsHostnames: true

Tags:

- Key: Name

Value: !Ref EnvironmentName

InternetGateway:

Type: AWS::EC2::InternetGateway

Properties:

Tags:

- Key: Name

Value: !Ref EnvironmentName

InternetGatewayAttachment:

Type: AWS::EC2::VPCGatewayAttachment

Properties:

InternetGatewayId: !Ref InternetGateway

VpcId: !Ref VPC

PublicSubnet1:

Type: `AWS::EC2::Subnet`

Properties:

VpcId: `!Ref VPC`

AvailabilityZone: `!Select [0, !GetAZs ""]`

CidrBlock: `10.26.0.0/24`

MapPublicIpOnLaunch: `true`

Tags:

- Key: `Name`

Value: `!Sub ${EnvironmentName} Public Subnet (AZ1)`

PrivateSubnet1:

Type: `AWS::EC2::Subnet`

Properties:

VpcId: `!Ref VPC`

CidrBlock: `10.26.1.0/24`

AvailabilityZone: `us-east-1a`

MapPublicIpOnLaunch: `false`

Tags:

- Key: `Name`

Value: `Private`

PrivateSubnet2:

Type: `AWS::EC2::Subnet`

Properties:

VpcId: `!Ref VPC`

CidrBlock: `10.26.2.0/24`

AvailabilityZone: `us-east-1b`

MapPublicIpOnLaunch: `false`

Tags:

- Key: `Name`

Value: `Private2`

```
PublicRouteTable:
  Type: AWS::EC2::RouteTable
  Properties:
    VpcId: !Ref VPC
    Tags:
      - Key: Name
        Value: !Sub ${EnvironmentName} Public Routes

DefaultPublicRoute:
  Type: AWS::EC2::Route
  DependsOn: InternetGatewayAttachment
  Properties:
    RouteTableId: !Ref PublicRouteTable
    DestinationCidrBlock: 0.0.0.0/0
    GatewayId: !Ref InternetGateway

PublicSubnet1RouteTableAssociation:
  Type: AWS::EC2::SubnetRouteTableAssociation
  Properties:
    RouteTableId: !Ref PublicRouteTable
    SubnetId: !Ref PublicSubnet1

PrivateRouteTable1:
  Type: AWS::EC2::RouteTable
  Properties:
    VpcId: !Ref VPC
    Tags:
      - Key: Name
        Value: !Sub ${EnvironmentName} Private Routes (AZ1)
```

WebTierInstance:

```
Type: AWS::EC2::Instance
Properties:
  InstanceType: t2.micro
  ImageId: !Ref AMI
  SubnetId: !Ref PublicSubnet1
  SecurityGroupIds:
    - !Ref WebTierSecurityGroup
```

WebTierSecurityGroup:

```
Type: AWS::EC2::SecurityGroup
Properties:
  GroupDescription: Allow HTTP and SSH from the internet
  VpcId: !Ref VPC
  SecurityGroupIngress:
    - IpProtocol: tcp
      FromPort: 80
      ToPort: 80
      CidrIp: 0.0.0.0/0
    - IpProtocol: tcp
      FromPort: 22
      ToPort: 22
      CidrIp: 0.0.0.0/0
```

ApplicationTierInstance:

Type: AWS::EC2::Instance

Properties:

InstanceType: t2.micro

ImageId: !Ref AMI

SubnetId: !Ref PrivateSubnet1

SecurityGroupIds:

- !Ref ApplicationTierSecurityGroup

ApplicationTierSecurityGroup:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Allow SSH from Web Tier

VpcId: !Ref VPC

SecurityGroupIngress:

- IpProtocol: tcp
 - FromPort: 22
 - ToPort: 22
 - SourceSecurityGroupId: !Ref WebTierSecurityGroup

InstanceSecurityGroupDataBase:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Allow access to the database

VpcId: !Ref VPC

SecurityGroupIngress:

- IpProtocol: tcp
 - FromPort: 3306
 - ToPort: 3306
 - SourceSecurityGroupId: !Ref ApplicationTierSecurityGroup

RDSDBSubnetGroup:

Type: `AWS::RDS::DBSubnetGroup`

Properties:

`DBSubnetGroupDescription`: Subnet Group for RDS

`SubnetIds`:

- `!Ref PrivateSubnet1`
- `!Ref PrivateSubnet2`

RDSDBInstance:

Type: `AWS::RDS::DBInstance`

Properties:

`AllocatedStorage`: 20

`AutoMinorVersionUpgrade`: true

`DBInstanceClass`: `db.t3.micro`

`DBInstanceIdentifier`: `!Ref DBName`

`DBName`: `!Ref DBName`

`Engine`: `MySQL`

`EngineVersion`: `"8.0.33"`

`MasterUsername`: `!Ref DBUsername`

`MasterUserPassword`: `!Ref DBPassword`

`PubliclyAccessible`: false

`StorageType`: `gp3`

`MultiAZ`: false

`Port`: `"3306"`

`StorageEncrypted`: false

`CopyTagsToSnapshot`: true

`EnableIAMDatabaseAuthentication`: false

`VPCSecurityGroups`:

- `!Ref InstanceSecurityGroupDataBase`

`DBSubnetGroupName`: `!Ref RDSDBSubnetGroup`

`DeletionProtection`: false

`MaxAllocatedStorage`: 1000

```
MaxAllocatedStorage: 1000
Tags:
  - Key: Name
    Value: DBAssessment
  - Key: createdBy
    Value: Hitesh Chauhan
  - Key: Project
    Value: CloudFormationAssignment01
  - Key: Environment
    Value: Prod
```

```
HostedZone01:
  Type: AWS::Route53::HostedZone
  Properties:
    HostedZoneConfig:
      Comment: ""
      Name: xyzcorporation.com
MyDNSRecord:
  Type: AWS::Route53::RecordSet
  Properties:
    HostedZoneId: !Ref HostedZone01
    Name: webtier3.xyzcorporation.com
    Type: A
    TTL: 300
    ResourceRecords:
      - !GetAtt WebTierInstance.PublicIp
```

This is the full code of this task performed.

Parameters:

EnvironmentName:

Description: An environment name that is prefixed to resource names

Type: String

#db

DBInstanceClass:

Description: RDS instance class

Type: String

Default: db.t2.micro

AllowedValues:

- db.t2.micro

- db.t2.small

ConstraintDescription: Must be a valid RDS instance class.

DBName:

Description: The name of the database

Type: String

Default: mydatabase

DBUsername:

Description: The database admin account username

Type: String

Default: admin

DBPassword:

Description: The database admin account password

Type: String

NoEcho: true

#route53

DomainName:

Description: The domain name for the Route 53 hosted zone

Type: String

Default: xyzcorporation.com

HostedZone:

Type: String

Description: The DNS name of an existing Amazon Route 53 hosted zone

AMI:

Type: String

Description: AMI ID for the web and application tier instances

Default: ami-063d43db0594b521b

Mappings:

RegionMap:

us-east-1:

AMI: ami-7f418316

us-west-1:

AMI: ami-951945d0

us-west-2:

AMI: ami-16fd7026

eu-west-1:

AMI: ami-24506250

sa-east-1:

AMI: ami-3e3be423

ap-southeast-1:

AMI: ami-74dda626

ap-southeast-2:

AMI: ami-b3990e89

ap-northeast-1:

AMI: ami-dcfa4edd

Resources:

VPC:

Type: AWS::EC2::VPC

Properties:

CidrBlock: 10.26.0.0/16

EnableDnsSupport: true

EnableDnsHostnames: true

Tags:

- **Key:** Name

Value: !Ref EnvironmentName

InternetGateway:

Type: AWS::EC2::InternetGateway

Properties:

Tags:

- **Key:** Name

Value: !Ref EnvironmentName

InternetGatewayAttachment:

Type: AWS::EC2::VPCElasticNetworkInterfaceAttachment

Properties:

InternetGatewayId: !Ref InternetGateway

VpcId: !Ref VPC

PublicSubnet1:

Type: AWS::EC2::Subnet

Properties:

VpcId: !Ref VPC

AvailabilityZone: !Select [0, !GetAZs ""]

CidrBlock: 10.26.0.0/24

MapPublicIpOnLaunch: true

Tags:

- Key: Name

Value: !Sub \${EnvironmentName} Public Subnet (AZ1)

PrivateSubnet1:

Type: AWS::EC2::Subnet

Properties:

VpcId: !Ref VPC

CidrBlock: 10.26.1.0/24

AvailabilityZone: us-east-1a

MapPublicIpOnLaunch: false

Tags:

- Key: Name

Value: Private

PrivateSubnet2:

Type: AWS::EC2::Subnet

Properties:

VpcId: !Ref VPC

CidrBlock: 10.26.2.0/24

AvailabilityZone: us-east-1b

MapPublicIpOnLaunch: false

Tags:

- Key: Name

Value: Private2

PublicRouteTable:

Type: AWS::EC2::RouteTable

Properties:

VpcId: !Ref VPC

Tags:

- Key: Name

Value: !Sub \${EnvironmentName} Public Routes

DefaultPublicRoute:

Type: AWS::EC2::Route

DependsOn: InternetGatewayAttachment

Properties:

RouteTableId: !Ref PublicRouteTable

DestinationCidrBlock: 0.0.0.0/0

GatewayId: !Ref InternetGateway

PublicSubnet1RouteTableAssociation:

Type: AWS::EC2::SubnetRouteTableAssociation

Properties:

RouteTableId: !Ref PublicRouteTable

SubnetId: !Ref PublicSubnet1

PrivateRouteTable1:

Type: AWS::EC2::RouteTable

Properties:

VpcId: !Ref VPC

Tags:

- Key: Name

Value: !Sub \${EnvironmentName} Private Routes (AZ1)

WebTierInstance:

Type: AWS::EC2::Instance

Properties:

InstanceType: t2.micro

ImageId: !Ref AMI

SubnetId: !Ref PublicSubnet1

SecurityGroupIds:

- !Ref WebTierSecurityGroup

WebTierSecurityGroup:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Allow HTTP and SSH from the internet

VpcId: !Ref VPC

SecurityGroupIngress:

- **IpProtocol:** tcp

FromPort: 80

ToPort: 80

CidrIp: 0.0.0.0/0

- **IpProtocol:** tcp

FromPort: 22

ToPort: 22

CidrIp: 0.0.0.0/0

ApplicationTierInstance:

Type: AWS::EC2::Instance

Properties:

InstanceType: t2.micro
ImageId: !Ref AMI
SubnetId: !Ref PrivateSubnet1
SecurityGroupIds:
- **!Ref ApplicationTierSecurityGroup**

ApplicationTierSecurityGroup:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Allow SSH from Web Tier

VpcId: !Ref VPC

SecurityGroupIngress:

- **IpProtocol: tcp**

FromPort: 22

ToPort: 22

SourceSecurityGroupId: !Ref WebTierSecurityGroup

InstanceSecurityGroupDataBase:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Allow access to the database

VpcId: !Ref VPC

SecurityGroupIngress:

- **IpProtocol: tcp**

FromPort: 3306

ToPort: 3306

SourceSecurityGroupId: !Ref ApplicationTierSecurityGroup

RDSDBSubnetGroup:

Type: AWS::RDS::DBSubnetGroup

Properties:

DBSubnetGroupDescription: Subnet Group for RDS

SubnetIds:

- !Ref PrivateSubnet1
- !Ref PrivateSubnet2

RDSDBInstance:

Type: AWS::RDS::DBInstance

Properties:

AllocatedStorage: 20

AutoMinorVersionUpgrade: true

DBInstanceClass: db.t3.micro

DBInstanceIdentifier: !Ref DBName

DBName: !Ref DBName

Engine: MySQL

EngineVersion: "8.0.33"

MasterUsername: !Ref DBUsername

MasterUserPassword: !Ref DBPassword

PubliclyAccessible: false

StorageType: gp3

MultiAZ: false

Port: "3306"

StorageEncrypted: false

CopyTagsToSnapshot: true

EnableIAMDatabaseAuthentication: false

VPCSecurityGroups:

- !Ref InstanceSecurityGroupDataBase

DBSubnetGroupName: !Ref RDSDBSubnetGroup

DeletionProtection: false

MaxAllocatedStorage: 1000

Tags:

- Key: Name

Value: DBAssessment

- Key: createdBy

Value: Hitesh Chauhan

- Key: Project

Value: CloudFormationAssignment01

- Key: Environment

Value: Prod

HostedZone01:

Type: AWS::Route53::HostedZone

Properties:

HostedZoneConfig:

Comment: ""

Name: xyzcorporation.com

MyDNSRecord:

Type: AWS::Route53::RecordSet

Properties:

HostedZoneId: !Ref HostedZone01

Name: webtier3.xyzcorporation.com

Type: A

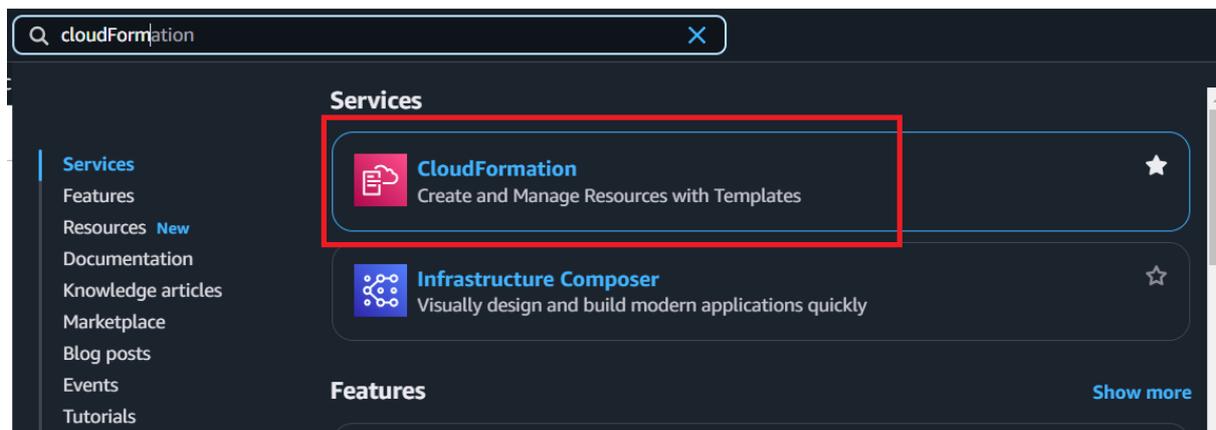
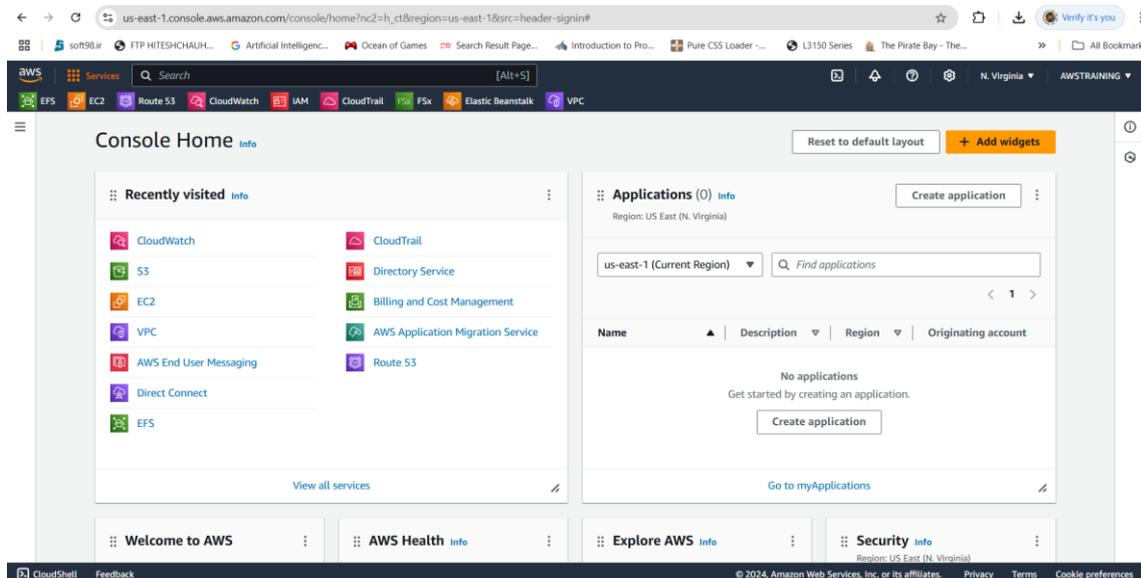
TTL: 300

ResourceRecords:

- !GetAtt WebTierInstance.PublicIp

Then After Complete the code and need to upload this code to cloud formation so this code will create the infrastructure with the help .yaml file

Login to AWS Management Console then Search Cloud Formation



Here we need to upload the template as we created so in this case we need to choose existing template then specify template there is 3 option but we need to choose upload the template. This template through create the infrastructure.

Create stack

- Step 2
- Specify stack details
- Step 3
- Configure stack options
- Step 4
- Review and create

Prerequisite - Prepare template

You can also create a template by scanning your existing resources in the [IaC generator](#).

Prepare template
 Choose an existing template
 Upload or choose an existing template.

Use a sample template
 Choose from our sample template library.

Build from Infrastructure Composer
 Create a template using a visual builder.

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
 Provide an Amazon S3 URL to your template.

Upload a template file
 Upload your template directly to the console.

Sync from Git
 Sync a template from your Git repository.

Upload a template file

webtier3.yaml

JSON or YAML formatted file

S3 URL: <https://s3.us-east-1.amazonaws.com/cf-templates-2jwhgbwpj8cw-us-east-1/2024-11-17T075534.8472d5-webtier3.yaml>

After upload the template next step will be provide a stack name

Stack Name :cloudformationinstance without spacing.

Then As per template we have set the parameters like AMI,DBInstanceClass,DBPassword,DBUsername,DomainName,EnvironmentName and HostedZone.

Create stack

- Step 1
- Create stack
- Step 2**
- Specify stack details
- Step 3
- Configure stack options
- Step 4
- Review and create

Specify stack details

Provide a stack name

Stack name

cloudformationinstance

Stack name must be 1 to 128 characters, start with a letter, and only contain alphanumeric characters. Character count: 22/128.

Parameters

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

AMI
 AMI ID for the web and application tier instances

ami-063d43db0594b521b

DBInstanceClass
 RDS instance class

db.t2.micro

DBPassword
The database admin account password

DBUsername
The database admin account username

DomainName
The domain name for the Route 53 hosted zone

EnvironmentName
An environment name that is prefixed to resource names

HostedZone
The DNS name of an existing Amazon Route 53 hosted zone

Cancel Previous **Next**

After Click Next You will see Configure Stack option we set a default setting in this.

> Create stack ?

Step 1
● Create stack

Step 2
● Specify stack details

Step 3
● **Configure stack options**

Step 4
○ Review and create

Configure stack options

Tags - optional
Tags (key-value pairs) are used to apply metadata to AWS resources, which can help in organizing, identifying, and categorizing those resources. You can add up to 50 unique tags for each stack.

No tags associated with the stack.

[Add new tag](#)

You can add 50 more tag(s)

Permissions - optional
Specify an existing AWS Identity and Access Management (IAM) service role that CloudFormation can assume.

IAM role - optional
Choose the IAM role for CloudFormation to use for all operations performed on the stack.

IAM role name ▼ Sample-role-name ▼ [Remove](#)

[↻](#)

Stack failure options

Behavior on provisioning failure

Specify the roll back behavior for a stack failure. [Learn more](#)

- Roll back all stack resources**
Roll back the stack to the last known stable state.
- Preserve successfully provisioned resources**
Preserves the state of successfully provisioned resources, while rolling back failed resources to the last known stable state. Resources without a last known stable state will be deleted upon the next stack operation.

Delete newly created resources during a rollback

Specify whether resources that were created during a failed operation should be deleted regardless of their deletion policy. [Learn more](#)

- Use deletion policy**
Retains or deletes created resources according to their attached deletion policy.
- Delete all newly created resources**
Deletes created resources during a rollback regardless of their attached deletion policy.

Advanced options

You can set additional options for your stack, like notification options and a stack policy. [Learn more](#)

► Stack policy - *optional*

Defines the resources that you want to protect from unintentional updates during a stack update.

► Rollback configuration - *optional*

Specify alarms for CloudFormation to monitor when creating and updating the stack. If the operation breaches an alarm threshold, CloudFormation rolls it back.

► Notification options - *optional*

Specify a new or existing Amazon Simple Notification Service topic where notifications about stack events are sent.

► Stack creation options - *optional*

Specify the timeout and termination protection options for stack creation.

Cancel

Previous

Next

Then After Click next.we need to review the all the setting as per templates

> Create stack ⓘ ⌘

Step 1
● Create stack

Step 2
● Specify stack details

Step 3
● Configure stack options

Step 4
● **Review and create**

Review and create

Step 1: Specify template Edit

Prerequisite - Prepare template

Template
Template is ready

Template

Template URL
`https://s3.us-east-1.amazonaws.com/cf-templates-2jwhgbwpj8cw-us-east-1/2024-11-18T180359.890Z1pm-webtier3.yaml`

Stack description
-

Step 2: Specify stack details

[Edit](#)

Provide a stack name

Stack name
cloudformationinstance

Parameters (8)

< 1 > 

Key ▲	Value ▼
AMI	ami-063d43db0594b521b
DBInstanceClass	db.t2.micro
DBName	mydatabase
DBPassword	*****
DBUsername	admin
DomainName	xyzcorporation.com

EnvironmentName -

HostedZone -

Step 3: Configure stack options

[Edit](#)

Tags

< 1 >

Key ▲ | Value ▼

No tags

There are no tags defined for this stack

Step 3: Configure stack options

[Edit](#)

Tags

< 1 >

Key ▲ | Value ▼

No tags

There are no tags defined for this stack

Permissions

No permissions

There is no IAM role associated with this stack

Stack failure options

Rollback on failure
Activated

Delete newly created resources during a rollback
Deactivated

Stack policy

No stack policy
There is no stack policy defined

Rollback configuration

Monitoring time
-

CloudWatch alarm ARN
-

Notification options

SNS topic ARN
-

No notification options
There are no notification options defined

Stack creation options

Timeout
-

Termination protection
Deactivated

Quick-create link

Use quick-create links to get stacks up and running quickly from the AWS CloudFormation console with the same basic configuration as this stack. Copy the URL on the link to share. [Learn more](#)

[Open quick-create link](#)

[Create change set](#) Cancel Previous Submit

After Review completed we need to submit the code to cloud formation.cloud formation will help you create the infrastructure.

The screenshot shows the AWS CloudFormation console for a stack named 'cloudformationinstance'. On the left, the 'Stacks (1)' list shows the stack in a 'CREATE_IN_PROGRESS' state. The main panel shows the 'Events - updated' tab, with a table of events. The first event is a 'CREATE_IN_PROGRESS' event from 'cloudformationinstance' at '2024-11-18 23:40:10 UTC+0530'. The 'Submit' button from the previous step is highlighted with a red box in the image.

Timestamp	Logical ID	Status	Detailed status
2024-11-18 23:40:10 UTC+0530	cloudformationinstance	CREATE_IN_PROGRESS	

Stacks (1)

🔍 Filter by stack name

Filter status

Active ▼ View nested

< 1 >

Stacks

- cloudformationinstance
2024-11-18 23:40:10 UTC+0530
🔄 CREATE_IN_PROGRESS

Events (60) Detect root cause

🔍 Search events

Timestamp	Logical ID	Status	Detailed status	Status reason
2024-11-18 23:40:14 UTC+0530	InternetGateway	🔄 CREATE_IN_PROGRESS	✅ CONFIGURATION_COMPLETE	Eventual consistency check initiated
2024-11-18 23:40:13 UTC+0530	VPC	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:13 UTC+0530	InternetGateway	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:13 UTC+0530	HostedZone01	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:12 UTC+0530	VPC	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:12 UTC+0530	InternetGateway	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:12 UTC+0530	HostedZone01	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:10 UTC+0530	cloudformationinstance	🔄 CREATE_IN_PROGRESS	-	User Initiated

Stacks (1)

🔍 Filter by stack name

Filter status

Active ▼ View nested

< 1 >

Stacks

- cloudformationinstance
2024-11-18 23:40:10 UTC+0530
🔄 CREATE_IN_PROGRESS

Events (60) Detect root cause

🔍 Search events

Timestamp	Logical ID	Status	Detailed status	Status reason
2024-11-18 23:40:25 UTC+0530	WebTierSecurityGroup	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:25 UTC+0530	PrivateRouteTable1	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:25 UTC+0530	PrivateSubnet2	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:25 UTC+0530	PublicRouteTable	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:25 UTC+0530	PrivateSubnet1	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:25 UTC+0530	InternetGatewayAttachment	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:24 UTC+0530	VPC	✅ CREATE_COMPLETE	-	-
2024-11-18 23:40:14 UTC+0530	InternetGateway	🔄 CREATE_IN_PROGRESS	✅ CONFIGURATION_COMPLETE	Eventual consistency check initiated

Stacks (1)

🔍 Filter by stack name

Filter status

Active ▼ View nested

< 1 >

Stacks

- cloudformationinstance
2024-11-18 23:40:10 UTC+0530
🔄 CREATE_IN_PROGRESS

Events (60) Detect root cause

🔍 Search events

Timestamp	Logical ID	Status	Detailed status	Status reason
2024-11-18 23:40:26 UTC+0530	PublicSubnet1	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:26 UTC+0530	PublicRouteTable	🔄 CREATE_IN_PROGRESS	✅ CONFIGURATION_COMPLETE	Eventual consistency check initiated
2024-11-18 23:40:26 UTC+0530	PrivateSubnet2	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:26 UTC+0530	PrivateSubnet1	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:26 UTC+0530	PrivateRouteTable1	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:26 UTC+0530	PublicRouteTable	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:26 UTC+0530	InternetGatewayAttachment	🔄 CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:25 UTC+0530	PublicSubnet1	🔄 CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:25 UTC+0530	WebTierSecurityGroup	🔄 CREATE_IN_PROGRESS	-	-

2024-11-18 23:40:29 UTC+0530	PublicSubnet1	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:29 UTC+0530	InternetGateway	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:28 UTC+0530	PrivateSubnet1	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:28 UTC+0530	PrivateSubnet2	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:27 UTC+0530	InternetGatewayAttachment	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:27 UTC+0530	WebTierSecurityGroup	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:27 UTC+0530	PrivateRouteTable1	ⓘ CREATE_IN_PROGRESS	✔ CONFIGURATION_COMPLETE	Eventual consistency check initiated
2024-11-18 23:40:26 UTC+0530	PublicSubnet1	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated

2024-11-18 23:40:34 UTC+0530	ApplicationTierSecurityGroup	ⓘ CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:34 UTC+0530	WebTierSecurityGroup	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:32 UTC+0530	RDSDBSubnetGroup	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:32 UTC+0530	RDSDBSubnetGroup	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:31 UTC+0530	PublicSubnet1RouteTableAssociation	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:31 UTC+0530	PublicSubnet1RouteTableAssociation	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:30 UTC+0530	PublicSubnet1RouteTableAssociation	ⓘ CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:30 UTC+0530	RDSDBSubnetGroup	ⓘ CREATE_IN_PROGRESS	-	-

cloudformationinstance



Stacks (1)

Filter by stack name

Filter status: Active View nested

Stacks

- cloudformationinstance
2024-11-18 23:40:10 UTC+0530
ⓘ CREATE_IN_PROGRESS

Events (60)

Detect root cause

Search events

Timestamp	Logical ID	Status	Detailed status	Status reason
2024-11-18 23:40:38 UTC+0530	DefaultPublicRoute	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:38 UTC+0530	WebTierInstance	ⓘ CREATE_IN_PROGRESS	✔ CONFIGURATION_COMPLETE	Eventual consistency check initiated
2024-11-18 23:40:37 UTC+0530	PrivateRouteTable1	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:37 UTC+0530	DefaultPublicRoute	ⓘ CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:36 UTC+0530	ApplicationTierSecurityGroup	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:36 UTC+0530	PublicRouteTable	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:36 UTC+0530	WebTierInstance	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:34 UTC+0530	WebTierInstance	ⓘ CREATE_IN_PROGRESS	-	-

2024-11-18 23:40:52 UTC+0530	InstanceSecurityGroupDatabase	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:47 UTC+0530	WebTierInstance	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:46 UTC+0530	InstanceSecurityGroupDatabase	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:45 UTC+0530	ApplicationTierInstance	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:43 UTC+0530	InstanceSecurityGroupDatabase	ⓘ CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:43 UTC+0530	ApplicationTierInstance	ⓘ CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:42 UTC+0530	ApplicationTierSecurityGroup	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:38 UTC+0530	DefaultPublicRoute	✔ CREATE_COMPLETE	-	-

2024-11-18 23:41:26 UTC+0530	MyDNSRecord	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:56 UTC+0530	ApplicationTierInstance	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:55 UTC+0530	MyDNSRecord	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:55 UTC+0530	RDSDBInstance	ⓘ CREATE_IN_PROGRESS	-	Resource creation Initiated
2024-11-18 23:40:55 UTC+0530	MyDNSRecord	ⓘ CREATE_IN_PROGRESS	-	-
2024-11-18 23:40:54 UTC+0530	HostedZone01	✔ CREATE_COMPLETE	-	-
2024-11-18 23:40:52 UTC+0530	RDSDBInstance	ⓘ CREATE_IN_PROGRESS	-	-

Resources (19)

Logical ID	Physical ID	Type	Status	Module
PublicRouteTable	rtb-0c8d4b4d93abf4cea	AWS::EC2::RouteTable	✔ CREATE_COMPLETE	-
PublicSubnet1	subnet-055241059f4e1df63	AWS::EC2::Subnet	✔ CREATE_COMPLETE	-
PublicSubnet1RouteTableAssociation	rtbassoc-001f9823c4b650db5	AWS::EC2::SubnetRouteTableAssociation	✔ CREATE_COMPLETE	-
RDSDBInstance	mydatabase	AWS::RDS::DBInstance	ⓘ CREATE_IN_PROGRESS	-
RDSDBSubnetGroup	cloudformationinstance-rdsdbsubnetgroup-6lexkpw9rorp	AWS::RDS::DBSubnetGroup	✔ CREATE_COMPLETE	-
VPC	vpc-03bffb17009438a4a	AWS::EC2::VPC	✔ CREATE_COMPLETE	-
WebTierInstance	i-0aa4654286d23cfd7	AWS::EC2::Instance	✔ CREATE_COMPLETE	-
WebTierSecurityGroup	sg-0c42205f6ee8d8590	AWS::EC2::SecurityGroup	✔ CREATE_COMPLETE	-

Resources (19)

Logical ID	Physical ID	Type	Status	Module
DefaultPublicRoute	0c8d4b4d93abf4cea 0.0.0.0/0	AWS::EC2::Route	CREATE_COMPLETE	-
HostedZone01	Z09315002SDBCJQRM3B5R	AWS::Route53::HostedZone	CREATE_COMPLETE	-
InstanceSecurityGroupData Base	sg-027729a683b465233	AWS::EC2::SecurityGroup	CREATE_COMPLETE	-
InternetGateway	igw-095e118dc3b17a132	AWS::EC2::InternetGateway	CREATE_COMPLETE	-
InternetGatewayAttachment	IGW vpc-03bffb17009438a4a	AWS::EC2::VPCGatewayAttachment	CREATE_COMPLETE	-
MyDNSRecord	webtier3.xyzcorporation.com	AWS::Route53::RecordSet	CREATE_COMPLETE	-
PrivateRouteTable1	rtb-0a1bcd50e619b5133	AWS::EC2::RouteTable	CREATE_COMPLETE	-
PrivateSubnet1	subnet-098abfb3b316a9a14	AWS::EC2::Subnet	CREATE_COMPLETE	-
PrivateSubnet2	subnet-03e60bc4188364da7	AWS::EC2::Subnet	CREATE_COMPLETE	-
ApplicationTierInstance	i-0223bf0fd951e94fa	AWS::EC2::Instance	CREATE_COMPLETE	-
ApplicationTierSecurityGroup	sg-0f1302a16548373a4	AWS::EC2::SecurityGroup	CREATE_COMPLETE	-

This Is the Parameter section as we set before the templates

The screenshot shows the AWS CloudFormation console interface. On the left, there is a 'Stacks (1)' sidebar with a search bar and a filter set to 'Active'. The main area displays the 'cloudformationinstance' stack. At the top right of the stack view, there are buttons for 'Delete', 'Update', 'Stack actions', and 'Create stack'. Below these are tabs for 'Stack info', 'Events - updated', 'Resources', 'Outputs', 'Parameters', 'Template', 'Change sets', and 'Git sync'. The 'Parameters' tab is selected, showing a table with 8 parameters. Each row includes a 'Key', a 'Value', and a 'Resolved value'.

Key	Value	Resolved value
AMI	ami-063d43db0594b521b	-
DBInstanceClass	db.t2.micro	-
DBName	mydatabase	-
DBPassword	****	-
DBUsername	admin	-
DomainName	xyzcorporation.com	-
EnvironmentName	-	-
HostedZone	-	-

After Complete this process we need to all things verify.

This is the instance created

1. public instance

2. private instance

<input checked="" type="checkbox"/>	i-0aa4654286d23cfd7	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-54-158-144-63.co...
<input checked="" type="checkbox"/>	i-0223bf0fd951e94fa	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	-

EC2 > Instances > i-0aa4654286d23cfd7

Instance summary for i-0aa4654286d23cfd7

Updated less than a minute ago

Instance ID i-0aa4654286d23cfd7	Public IPv4 address 54.158.144.63 open address	Private IPv4 addresses 10.26.0.62
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-54-158-144-63.compute-1.amazonaws.com open address
Hostname type IP name: ip-10-26-0-62.ec2.internal	Private IP DNS name (IPv4 only) ip-10-26-0-62.ec2.internal	Elastic IP addresses -
Answer private resource DNS name -	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 54.158.144.63 [Public IP]	VPC ID vpc-03bffb17009438a4a	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-055241059f4e1df63 (Public Subnet (AZ1))	
IMDSv2 Required	Instance ARN arn:aws:ec2:us-east-1:207567757353:instance/i-0aa4654286d23cfd7	

This is the security group as per templates

Details | Status and alarms | Monitoring | **Security** | Networking | Storage | Tags

▼ Security details

IAM Role -	Owner ID 207567757353	Launch time Mon Nov 18 2024 23:40:36 GMT+0530 (India Standard Time)
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Security groups

[sg-0c42205f6ee8d8590 \(cloudformationinstance-WebTierSecurityGroup-spSyCgl0dwzu\)](#)

▼ Inbound rules

Name	Security group rule ID	Port range	Protocol	Source	Security groups
-	sg-04c5ba59c167d4bdb	22	TCP	0.0.0.0/0	cloudformationinstance-WebTierSecu.
-	sg-0b3d6177f70ec6e40	80	TCP	0.0.0.0/0	cloudformationinstance-WebTierSecu.

Details | Status and alarms | Monitoring | Security | **Networking** | Storage | Tags

▼ Networking details info

Public IPv4 address 54.158.144.63 open address	Private IPv4 addresses 10.26.0.62	VPC ID vpc-03bffb17009438a4a
Public IPv4 DNS ec2-54-158-144-63.compute-1.amazonaws.com open address	Private IP DNS name (IPv4 only) ip-10-26-0-62.ec2.internal	Secondary private IPv4 addresses -
Subnet ID subnet-055241059f4e1df63 (Public Subnet (AZ1))	IPv6 addresses -	Outpost ID -
Availability zone us-east-1a	Carrier IP addresses (ephemeral) -	Answer RBN DNS hostname IPv4 Disabled
Use RBN as guest OS hostname Disabled		

EC2 > Instances > i-0223bf0fd951e94fa

Instance summary for i-0223bf0fd951e94fa info Refresh Connect Instance state ▼ Actions ▼
Updated less than a minute ago

Instance ID i-0223bf0fd951e94fa	Public IPv4 address -	Private IPv4 addresses 10.26.1.11
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-10-26-1-11.ec2.internal	Private IP DNS name (IPv4 only) ip-10-26-1-11.ec2.internal	Elastic IP addresses -
Answer private resource DNS name -	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address -	VPC ID vpc-03bffb17009438a4a	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-098abfb3b316a9a14 (Private)	
IMDSv2 Required	Instance ARN arn:aws:ec2:us-east-1:207567757353:instance/i-0223bf0fd951e94fa	

Details | Status and alarms | Monitoring | **Security** | Networking | Storage | Tags

▼ Security details

IAM Role -	Owner ID 207567757353	Launch time Mon Nov 18 2024 23:40:44 GMT+0530 (India Standard Time)
Security groups sg-0f1302a16548373a4 (cloudformationinstance-ApplicationTierSecurityGroup-1GD9W5ckJgCW)		

▼ Inbound rules

Filter rules

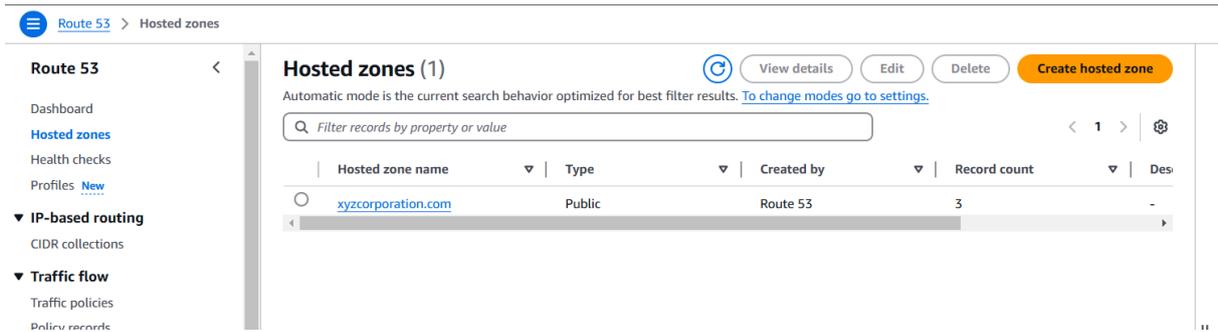
Name	Security group rule ID	Port range	Protocol	Source	Security groups
-	sgr-05a5820c40a380361	22	TCP	sg-0c42205f6ee8d8590	cloudformationinstance-ApplicationTi...

▼ Outbound rules

Filter rules

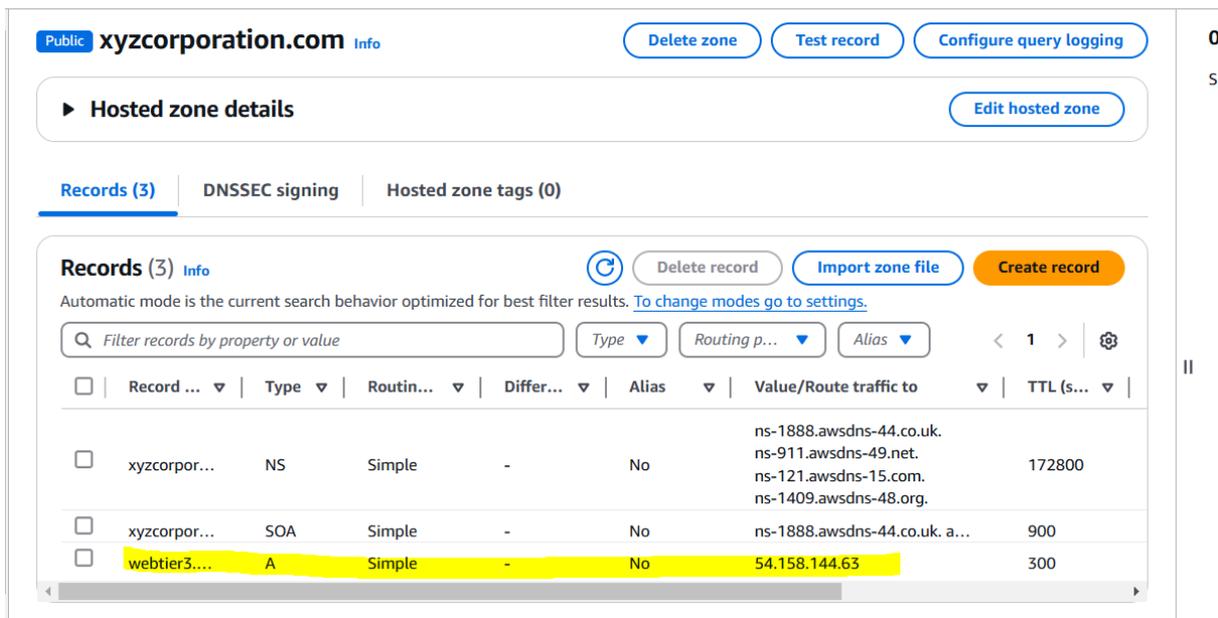
Name	Security group rule ID	Port range	Protocol	Destination	Security groups
-	sgr-0c08f8001aef87403	All	All	0.0.0.0/0	cloudformationinstance-ApplicationTi...

This is the Hosted Zone



The screenshot shows the AWS Route 53 console. On the left is a navigation menu with options like Dashboard, Hosted zones, Health checks, Profiles, IP-based routing, and Traffic flow. The main area is titled "Hosted zones (1)" and shows a table with one entry: "xyzcorporation.com" of type "Public", created by "Route 53", with a record count of 3. There are buttons for "View details", "Edit", "Delete", and "Create hosted zone".

In this Hosted zone we have created A record as per code.



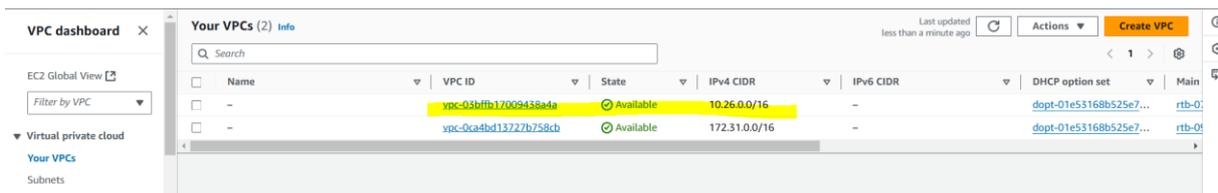
The screenshot shows the "Records (3)" page for the "xyzcorporation.com" hosted zone. It features a table of records with columns for Record name, Type, Routing policy, Differencing, Alias, Value/Route traffic to, and TTL. One record is highlighted in yellow: "webtier3..." of type "A", routing policy "Simple", with value "54.158.144.63" and TTL "300".

Record name	Type	Routing policy	Differencing	Alias	Value/Route traffic to	TTL (seconds)
xyzcorpor...	NS	Simple	-	No	ns-1888.awsdns-44.co.uk. ns-911.awsdns-49.net. ns-121.awsdns-15.com. ns-1409.awsdns-48.org.	172800
xyzcorpor...	SOA	Simple	-	No	ns-1888.awsdns-44.co.uk. a...	900
webtier3...	A	Simple	-	No	54.158.144.63	300

This is the VPC

1.Public

2.Private



The screenshot shows the AWS VPC dashboard. The "Your VPCs (2)" section displays a table with columns for Name, VPC ID, State, IPv4 CIDR, IPv6 CIDR, DHCP option set, and Main route table. Two VPCs are listed: "vpc-03bfb112009438a4a" with IPv4 CIDR "10.26.0.0/16" and "vpc-0ca4bed13727b758db" with IPv4 CIDR "172.31.0.0/16".

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCP option set	Main route table
-	vpc-03bfb112009438a4a	Available	10.26.0.0/16	-	dopt-01e53168b525e7...	rtb-0...
-	vpc-0ca4bed13727b758db	Available	172.31.0.0/16	-	dopt-01e53168b525e7...	rtb-0...

vpc-03bffb17009438a4a

Details Info

VPC ID vpc-03bffb17009438a4a	State Available	DNS hostnames Enabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-01e53168b525e7d96	Main route table rtb-07995323941073ba8	Main network ACL acl-0c52528e759b8bf10
Default VPC No	IPv4 CIDR 10.26.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 207567757353	

Resource map Info

VPC Show details
Your AWS virtual network
vpc-03bffb17009438a4a

Subnets (3)
Subnets within this VPC

- us-east-1a
 - Public Subnet (AZ1)
 - Private
- us-east-1b
 - Private2

Route tables (3)
Route network traffic to resources

- rtb-07995323941073ba8
 - Public Routes
 - Private Routes (AZ1)

Network connections (1)
Connections to other networks

- igw-095e118dc5b17a132

This is the subnet creation

1.Public

2.Private

As per the task.

VPC dashboard Subnets (9) Info

Find resources by attribute or tag

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
Public Subnet (AZ1)	subnet-055241059f4e1df63	Available	vpc-03bffb17009438a4a	10.26.0.0/24	-
Private	subnet-098abfb3b316a9a14	Available	vpc-03bffb17009438a4a	10.26.1.0/24	-
-	subnet-0d828a638aec31575	Available	vpc-0ca4bd13727b758cb	172.31.0.0/20	-
-	subnet-09c8bc6fedaf2bce	Available	vpc-0ca4bd13727b758cb	172.31.32.0/20	-
-	subnet-0c3a227a6d896e22e	Available	vpc-0ca4bd13727b758cb	172.31.64.0/20	-
-	subnet-07500936c65530e04	Available	vpc-0ca4bd13727b758cb	172.31.16.0/20	-

This is public subnet in internet.

subnet-055241059f4e1df63 / Public Subnet (AZ1)

Details

Subnet ID subnet-055241059f4e1df63	Subnet ARN arn:aws-ec2:us-east-1:207567757353:subnet/subnet-055241059f4e1df63	State Available	IPv4 CIDR 10.26.0.0/24
Available IPv4 addresses 250	IPv6 CIDR -	IPv6 CIDR association ID -	Availability Zone us-east-1a
Availability Zone ID use1-az2	Network border group us-east-1	VPC vpc-03bffb17009438a4a	Route table rtb-0c8d4d493abf4cea Public Routes
Network ACL acl-0c52528e759b8bf10	Default subnet No	Auto-assign public IPv4 address Yes	Auto-assign IPv6 address No
Auto-assign customer-owned IPv4 address No	Customer-owned IPv4 pool -	Outputpost ID -	IPv4 CIDR reservations -
IPv6 CIDR reservations -	IPv6-only No	Hostname type IP name	Resource name DNS A record Disabled
Resource name DNS AAAA record Disabled	DNS64 Disabled	Owner 207567757353	

Route table: rtb-0c8d4d493abf4cea / Public Routes

Routes (2)

Destination	Target
10.26.0.0/16	local
0.0.0.0/0	igw-095e118dc5b17a132

This is the private subnet without internet.

VPC > Subnets > subnet-098abfb3b316a9a14

subnet-098abfb3b316a9a14 / Private

Actions

Details

Subnet ID subnet-098abfb3b316a9a14	Subnet ARN arn:aws:ec2:us-east-1:207567757353:subnet/subnet-098abfb3b316a9a14	State Available	IPv4 CIDR 10.26.1.0/24
Available IPv4 addresses 249	IPv6 CIDR -	IPv6 CIDR association ID -	Availability Zone us-east-1a
Availability Zone ID use1-az2	Network border group us-east-1	VPC vpc-03bffb17009438a4a	Route table rtb-07995323941073ba8
Network ACL acl-0c52528e759b8b10	Default subnet No	Auto-assign public IPv4 address No	Auto-assign IPv6 address No
Auto-assign customer-owned IPv4 address No	Customer-owned IPv4 pool -	Outpost ID -	IPv4 CIDR reservations -
IPv6 CIDR reservations -	IPv6-only No	Hostname type IP name	Resource name DNS A record Disabled
Resource name DNS AAAA record Disabled	DNS64 Disabled	Owner 207567757353	

Flow logs | **Route table** | Network ACL | CIDR reservations | Sharing | Tags

Route table: rtb-07995323941073ba8

Routes (1)

Destination	Target
10.26.0.0/16	local

Route table

1.Public

2.Private.

Route tables (4) info

Find resources by attribute or tag

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
-	rtb-07995323941073ba8	-	-	Yes	vpc-03bffb17009438a4a	207567757353
Public Routes	rtb-0c8d4b4d93abf4cea	subnet-055241059f4e1d...	-	No	vpc-03bffb17009438a4a	207567757353
-	rtb-095aabe9b1593bb7	-	-	Yes	vpc-0ca4bd13727b758cb	207567757353
Private Routes (AZ1)	rtb-0a1bcd50e619b5133	-	-	No	vpc-03bffb17009438a4a	207567757353

VPC > Route tables > rtb-0c8d4b4d93abf4cea

rtb-0c8d4b4d93abf4cea / Public Routes

Actions

Details info

Route table ID rtb-0c8d4b4d93abf4cea	Main No	Explicit subnet associations subnet-055241059f4e1df63 / Public Subnet (AZ1)	Edge associations -
VPC vpc-03bffb17009438a4a	Owner ID 207567757353		

Routes | Subnet associations | Edge associations | Route propagation | Tags

Routes (2)

Destination	Target	Status	Propagated
0.0.0.0/0	igw-095e118dc3b17a132	Active	No
10.26.0.0/16	local	Active	No

VPC > Route tables > rtb-0c8d4b4d93abf4cea

rtb-0c8d4b4d93abf4cea / Public Routes

Actions

Details info

Route table ID rtb-0c8d4b4d93abf4cea	Main No	Explicit subnet associations subnet-055241059f4e1df63 / Public Subnet (AZ1)	Edge associations -
VPC vpc-03bffb17009438a4a	Owner ID 207567757353		

Routes | **Subnet associations** | Edge associations | Route propagation | Tags

Explicit subnet associations (1)

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
Public Subnet (AZ1)	subnet-055241059f4e1df63	10.26.0.0/24	-

Subnets without explicit associations (2)

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table.

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
Private	subnet-098abfb3b316a9a14	10.26.1.0/24	-
Private2	subnet-03e60bc4188364d7	10.26.2.0/24	-

VPC > Route tables > rtb-0c8d4b4d93abf4cea

rtb-0c8d4b4d93abf4cea / Public Routes

Actions

Details Info

Route table ID rtb-0c8d4b4d93abf4cea	Main No	Explicit subnet associations subnet-055241059f4e1df63 / Public Subnet (AZ1)	Edge associations -
VPC vpc-03bffb17009438a4a	Owner ID 207567757353		

Routes | Subnet associations | Edge associations | Route propagation | **Tags**

Tags

Search tags

Manage tags

Key	Value
Name	Public Routes
aws:cloudf...	PublicRouteTable
aws:cloudf...	cloudformationinstance
aws:cloudf...	arn:aws:cloudformation:us-east-1:207567757353:stack/cloudformationinstance/592ac970-a5d8-11ef-b2e5-0ec0e139a7c9

VPC dashboard

Internet gateways (2) Info

Actions Create internet gateway

Search

Name	Internet gateway ID	State	VPC ID	Owner
-	igw-01655718ff8c7f3a5	Attached	vpc-0ca8bd13727b758cb	207567757353
-	igw-095e118dc3b17a132	Attached	vpc-03bffb17009438a4a	207567757353

Virtual private cloud

- Your VPCs
- Subnets
- Route tables
- Internet gateways**

VPC > Internet gateways > igw-095e118dc3b17a132

igw-095e118dc3b17a132

Actions

Details Info

Internet gateway ID igw-095e118dc3b17a132	State Attached	VPC ID vpc-03bffb17009438a4a	Owner 207567757353
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Tags

Search tags

Manage tags

Key	Value
Name	
aws:cloudf...	cloudformationinstance
aws:cloudf...	InternetGateway
aws:cloudf...	arn:aws:cloudformation:us-east-1:207567757353:stack/cloudformationinstance/592ac970-a5d8-11ef-b2e5-0ec0e139a7c9

Amazon RDS

Introducing Aurora I/O-Optimized
Aurora's I/O-Optimized is a new cluster storage configuration that offers predictable pricing for all applications and improved price-performance, with up to 40% costs savings for I/O-intensive applications.

RDS > Databases

Consider creating a Blue/Green Deployment to minimize downtime during upgrades
You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. [RDS User Guide](#) [Aurora User Guide](#)

Databases (1)

Group resources Modify Actions Restore from S3 Create database

Filter by databases

DB identifier	Status	Role	Engine	Region	Size	Recommendations	CPU
mydatabase	Available	Instance	MySQL Co...	us-east-1a	db.t3.micro		4.28%

Summary

DB identifier mydatabase	Status ✔ Available	Role Instance	Engine MySQL Community	Recommendations
CPU  4.28%	Class db.t3.micro	Current activity  0 Connections	Region & AZ us-east-1a	

[Connectivity & security](#) | [Monitoring](#) | [Logs & events](#) | [Configuration](#) | [Zero-ETL integrations](#) | [Maintenance & backups](#) | [Tags](#) | [Recommendations](#)

Connectivity & security

Endpoint & port

Endpoint
 mydatabase.cjo22w4eqmmj.us-east-1.rds.amazonaws.com

Port
3306

Networking

Availability Zone
us-east-1a

VPC
(vpc-03bffb17009438a4a)

Subnet group
cloudformationinstance-rdsdbsubnetgroup-61exkpw9rorp

Subnets
subnet-098abfb3b316a9a14
subnet-03e60bc4188364da7

Security

VPC security groups
cloudformationinstance-
instanceSecurityGroupDataBase-
oOTmlZbkprPD (sg-027729a683b465233)
✔ Active

Publicly accessible
No

Certificate authority [Info](#)
rds-ca-rsa2048-g1

Certificate authority date

