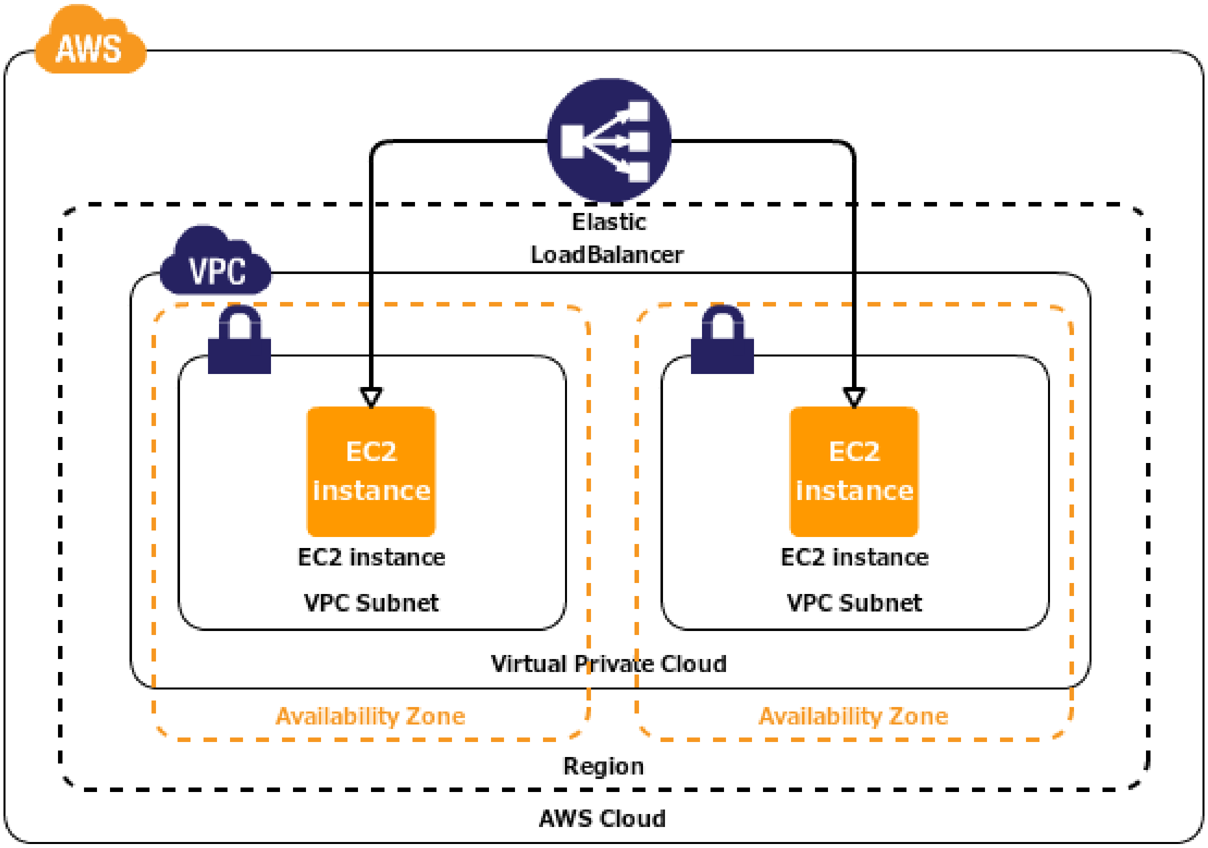
Create a SonarQube stack Ec2 using cloudformation.

In this document, we are presenting the deploying the sonarqube stack in AWS using cloudformation.

for installing the sonarqube, please follow this link below.

How to - Sonar installation setup steps

AWS ARCHITETURE FOR SONARQUBE STACK:



HOW TO DEPLOY Ec2 USING CLOUDFORMATION

- We will use awscli to deploy cloudformation template.

Cloudformation code:

cloudformation.yaml

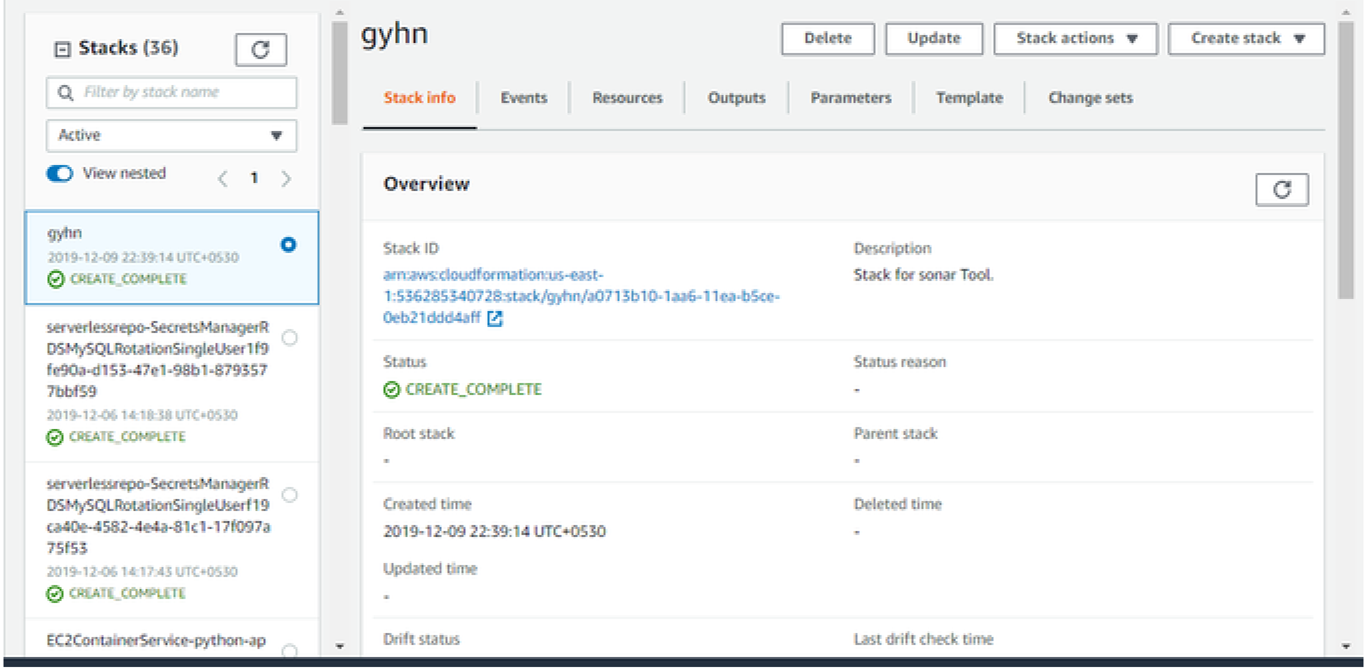
```
AWSTemplateFormatVersion: '2010-09-09'
Description: >
  Stack for sonar Tool.
Parameters:
  ami:
    Type: String
    Default: "ami-00d4e9ff62bc40e03"
  awsregion:
    Type: String
    Default: "us-east-1"
  vpccidr:
    Type: String
    Default: "10.20.0.0/16"
  subnetscidr:
    Type: CommaDelimitedList
    Default: "10.20.1.0/28, 10.20.2.0/28"
  azs:
    Type: CommaDelimitedList
    Default: "us-east-1c"
  secretkey:
    Type: String
    Default: "25r4QLtr56EqfxCVzEk3eHwS1lxhn6bWWEsYH8Ms"
  accesskey:
    Type: String
    Default: "AKIAXZXIY4Q4OQX5IE5K"
  webserversami:
    Type: String
    Default: "ami-00eb20669e0990cb4"
  instancetype:
    Type: String
    Default: "t2.large"
  securitygroup:
    Type: String
    Default: "sg-00ec57c74f9cf0cf7"

Resources:
  EC2Instance:
    Type: AWS::EC2::Instance
    Properties:
        ImageId: !Ref webserversami
        KeyName: prasanna
        InstanceType: !Ref instancetype
        Tags:
          - Key: name
            Value: sonar test Instance
        UserData:
          Fn::Base64: !Sub |
            #!/bin/bash -xe
            sudo su
            sudo yum update -y
            sudo wget https://d3pxv6yz143wms.cloudfront.net/11.0.5.10.1/
java-11-amazon-corretto-devel-11.0.5.10-1.x86_64.rpm
            sudo yum install -y java-11-amazon-corretto-devel-11.0.5.10-
1.x86_64.rpm
            sudo yum update -y
            sudo java -version
            sudo wget -O /etc/yum.repos.d/sonar.repo http://downloads.so
urceforge.net/project/sonar-pkg/rpm/sonar.repo
            sudo yum install -y sonar
            sudo service sonar restart

  MyLoadBalancer:
    Type: AWS::ElasticLoadBalancing::LoadBalancer
    Properties:
      AvailabilityZones: !Ref azs
      Instances:
      - Ref: EC2Instance
      Listeners:
      - LoadBalancerPort: '9000'
        InstancePort: '9000'
        Protocol: HTTP
      HealthCheck:
        Target: HTTP:9000/
        HealthyThreshold: '10'
        UnhealthyThreshold: '2'
        Interval: '30'
        Timeout: '20'
      Tags:
        - Key: Name
          Value: sonar instance

  InstanceSecurityGroup:
      Type: AWS::EC2::SecurityGroup
      Properties:
        GroupDescription: Enable SSH access via port 22
        SecurityGroupIngress:
        - IpProtocol: tcp
```

```
                FromPort: 9000
                ToPort: 9000
                CidrIp: 0.0.0.0/0
```

- To deploy this template run the following command,

> *aws2 cloudformation deploy --template-file {file_name}.yaml --stack-name {name}*

please find the results in cloud formation pics.



gyhn
2019-12-09 22:39:14 UTC+0530
CREATE_COMPLETE

serverlessrepo-SecretsManagerRDSMySQLRotationSingleUser1f9fe90a-d153-47e1-98b1-8793577bbf59
2019-12-06 14:18:38 UTC+0530
CREATE_COMPLETE

serverlessrepo-SecretsManagerRDSMySQLRotationSingleUserf19ca40e-4582-4e4a-81c1-17f097a75f53
2019-12-06 14:17:43 UTC+0530
CREATE_COMPLETE

EC2ContainerService-python-ap

Stack ID
arn:aws:cloudformation:us-east-1:536285340728:stack/gyhn/a0713b10-1aa6-11ea-b5ce-0eb21ddd4aff

Description
Stack for sonar Tool.

Status
CREATE_COMPLETE

Status reason
-

Root stack
-

Parent stack
-

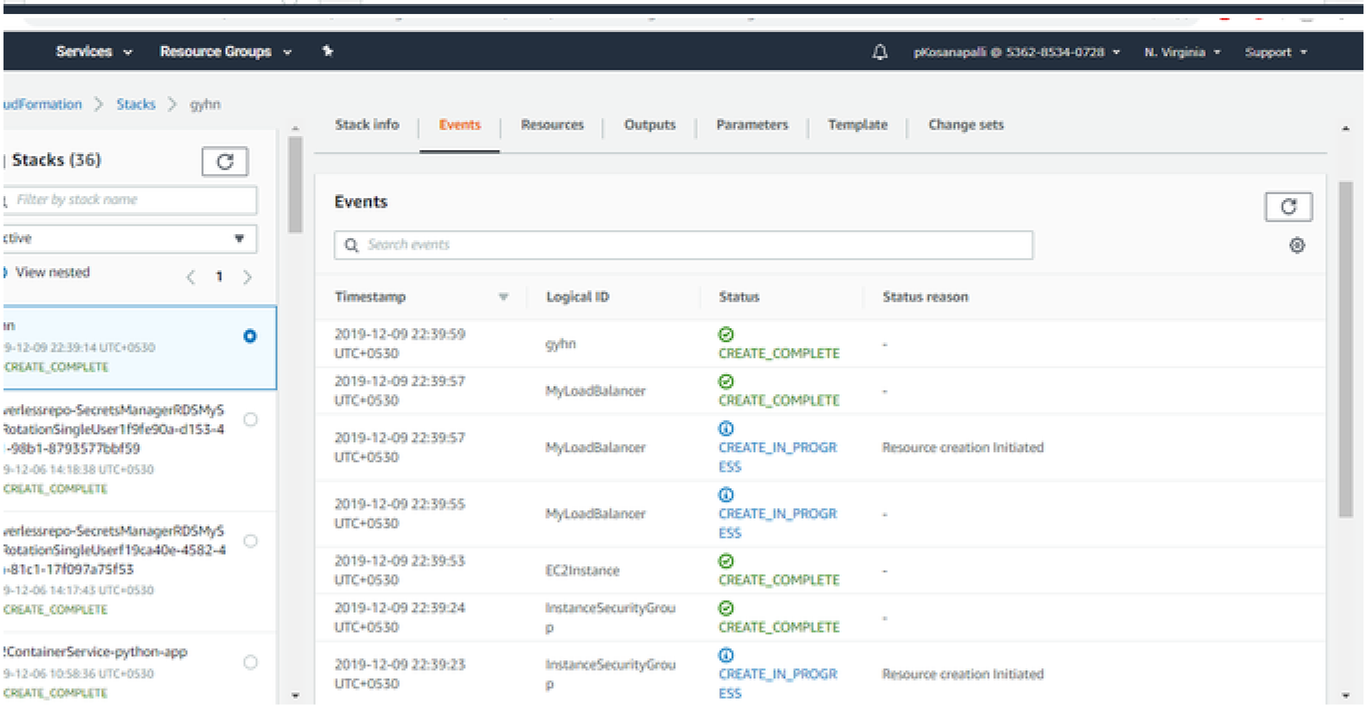
Created time
2019-12-09 22:39:14 UTC+0530

Deleted time
-

Updated time
-

Drift status

Last drift check time



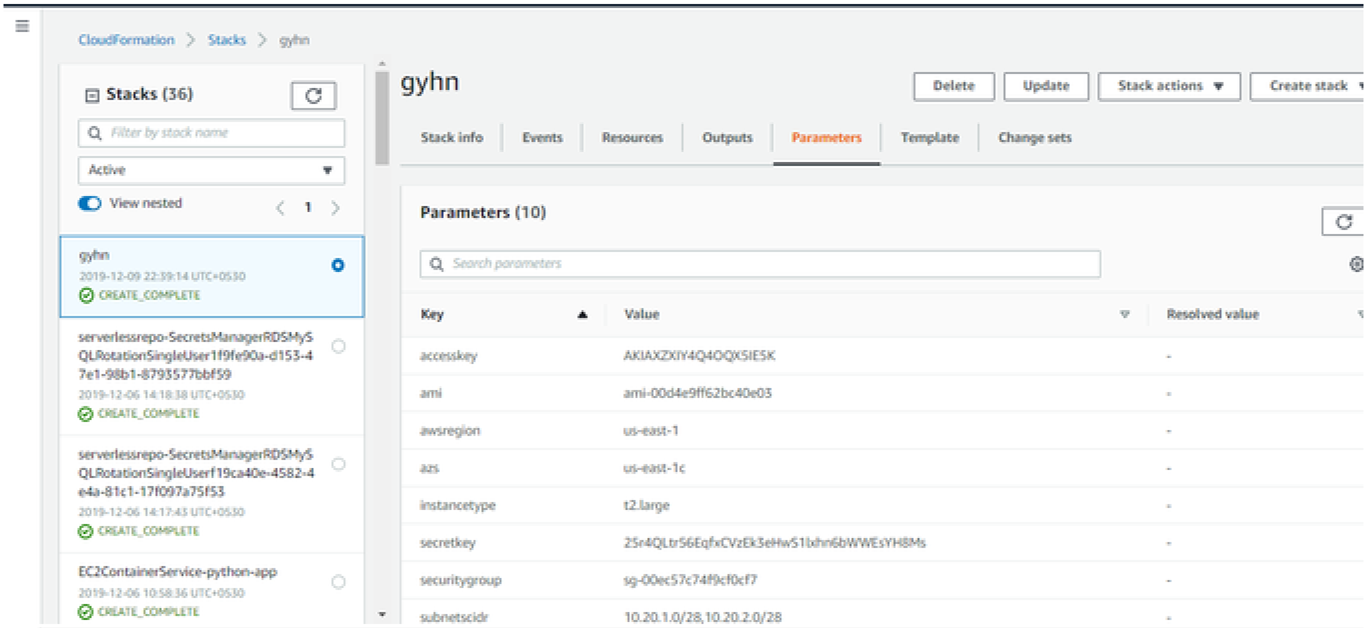
in
9-12-09 22:39:14 UTC+0530
CREATE_COMPLETE

verlessrepo-SecretsManagerRDSMySRotationSingleUser1f9fe90a-d153-4-98b1-8793577bbf59
9-12-06 14:18:38 UTC+0530
CREATE_COMPLETE

verlessrepo-SecretsManagerRDSMySRotationSingleUserf19ca40e-4582-4-81c1-17f097a75f53
9-12-06 14:17:43 UTC+0530
CREATE_COMPLETE

!ContainerService-python-app
9-12-06 10:58:36 UTC+0530
CREATE_COMPLETE

Timestamp	Logical ID	Status	Status reason
2019-12-09 22:39:59 UTC+0530	gyhn	CREATE_COMPLETE	-
2019-12-09 22:39:57 UTC+0530	MyLoadBalancer	CREATE_COMPLETE	-
2019-12-09 22:39:57 UTC+0530	MyLoadBalancer	CREATE_IN_PROGRESS	Resource creation Initiated
2019-12-09 22:39:55 UTC+0530	MyLoadBalancer	CREATE_IN_PROGRESS	-
2019-12-09 22:39:53 UTC+0530	EC2Instance	CREATE_COMPLETE	-
2019-12-09 22:39:24 UTC+0530	InstanceSecurityGroup	CREATE_COMPLETE	-
2019-12-09 22:39:23 UTC+0530	InstanceSecurityGroup	CREATE_IN_PROGRESS	Resource creation Initiated



CloudFormation > Stacks > gyhn

Stacks (36)

Filter by stock name

Active

View nested < 1 >

gyhn
2019-12-09 22:39:14 UTC+0530
CREATE_COMPLETE

serverlessrepo-SecretsManagerRDSMySQLRotationSingleUser1f9fe90a-d153-47e1-98b1-8793577bbf59
2019-12-06 14:18:38 UTC+0530
CREATE_COMPLETE

serverlessrepo-SecretsManagerRDSMySQLRotationSingleUserf19ca40e-4582-4e4a-81c1-17f097a75f53
2019-12-06 14:17:43 UTC+0530
CREATE_COMPLETE

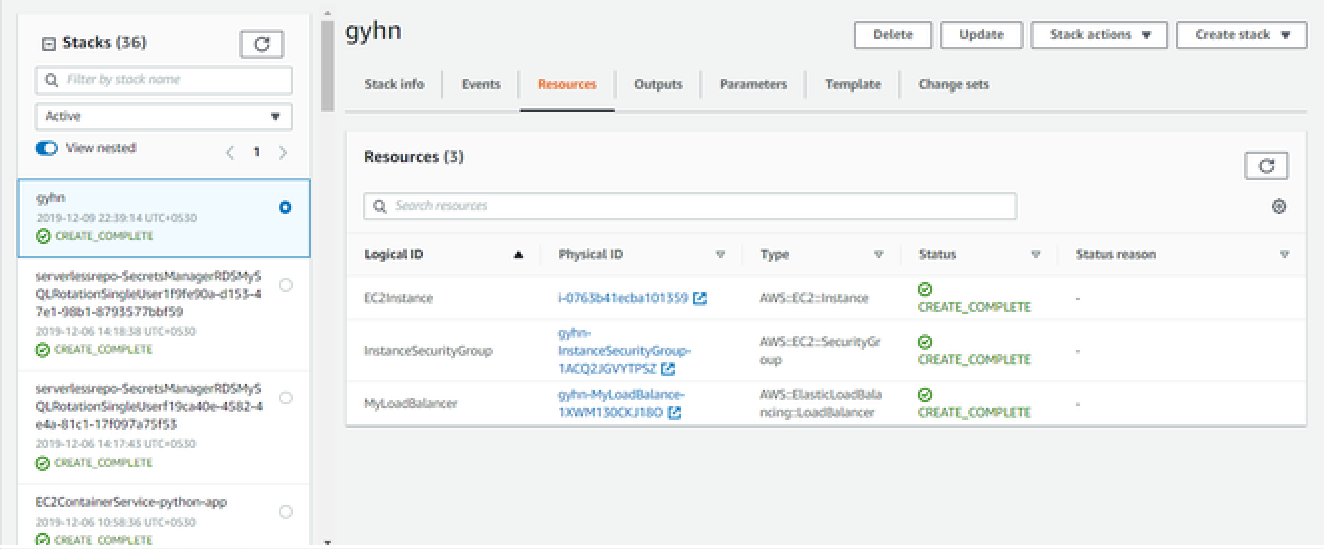
EC2ContainerService-python-app
2019-12-06 10:58:36 UTC+0530
CREATE_COMPLETE

gyhn

Parameters (10)

Search parameters

Key ▲	Value	Resolved value
accesskey	AKIAXZXIY4Q4OQXSIESK	-
ami	ami-00d4e9ff62bc40e03	-
awsregion	us-east-1	-
azs	us-east-1c	-
instancetype	t2.large	-
secretkey	25r4QLtr56EqfxCVzEk3eHwS1lxhn6bWWEsYH8Ms	-
securitygroup	sg-00ec57c74f9cf0cf7	-
subnetscidr	10.20.1.0/28,10.20.2.0/28	-



Stacks (36)

Filter by stock name

Active

View nested < 1 >

gyhn
2019-12-09 22:39:14 UTC+0530
CREATE_COMPLETE

serverlessrepo-SecretsManagerRDSMySQLRotationSingleUser1f9fe90a-d153-47e1-98b1-8793577bbf59
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2019-12-06 14:17:43 UTC+0530
CREATE_COMPLETE

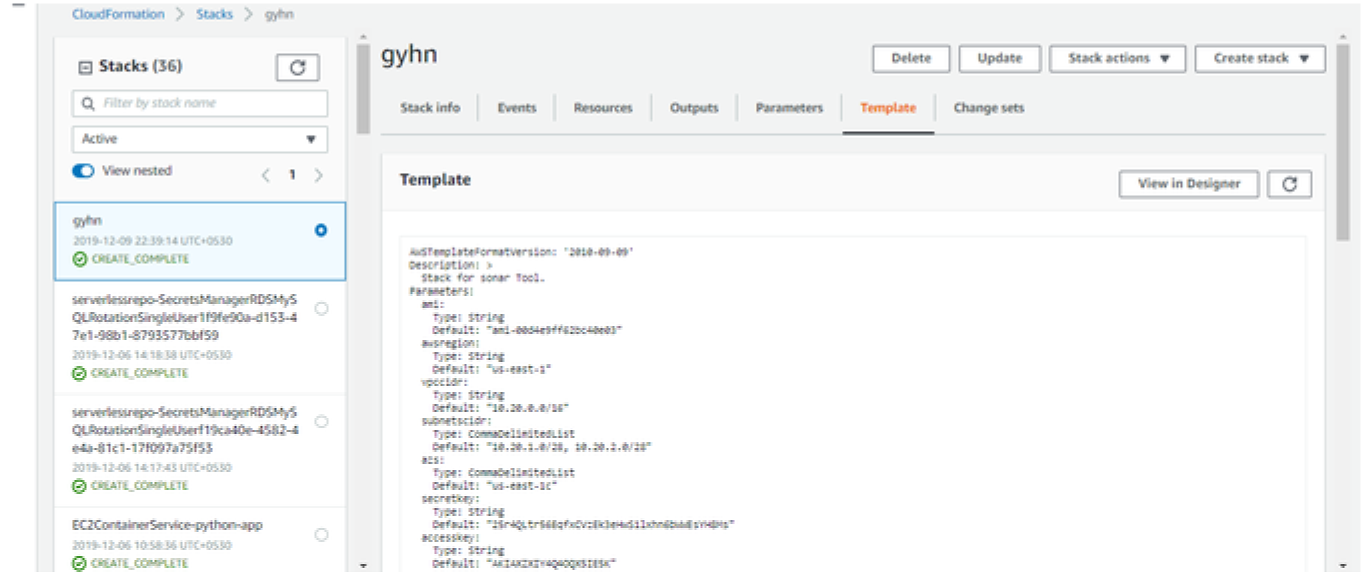
EC2ContainerService-python-app
2019-12-06 10:58:36 UTC+0530
CREATE_COMPLETE

gyhn

Resources (3)

Search resources

Logical ID ▲	Physical ID	Type	Status	Status reason
EC2Instance	i-0763b41ecba101359	AWS::EC2::Instance	✓ CREATE_COMPLETE	-
InstanceSecurityGroup	gyhn-InstanceSecurityGroup-1ACQ2JGVYTPSZ	AWS::EC2::SecurityGroup	✓ CREATE_COMPLETE	-
MyLoadBalancer	gyhn-MyLoadBalance-1XWM130CKJ18O	AWS::ElasticLoadBalancing::LoadBalancer	✓ CREATE_COMPLETE	-



CloudFormation > Stacks > gyhn

Stacks (36)

Filter by stock name

Active

View nested < 1 >

gyhn
2019-12-09 22:39:14 UTC+0530
CREATE_COMPLETE

serverlessrepo-SecretsManagerRDSMySQLRotationSingleUser1f9fe90a-d153-47e1-98b1-8793577bbf59
2019-12-06 14:18:38 UTC+0530
CREATE_COMPLETE

serverlessrepo-SecretsManagerRDSMySQLRotationSingleUserf19ca40e-4582-4e4a-81c1-17f097a75f53
2019-12-06 14:17:43 UTC+0530
CREATE_COMPLETE

EC2ContainerService-python-app
2019-12-06 10:58:36 UTC+0530
CREATE_COMPLETE

gyhn

Template

```
AWSTemplateFormatVersion: '2010-09-09'
Description: >
  Stack for sonar Tool.
Parameters:
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    Default: "ami-00d4e9ff62bc40e03"
  awsregion:
    Type: String
    Default: "us-east-1"
  vpccidr:
    Type: String
    Default: "10.20.0.0/16"
  subnetscidr:
    Type: CommaDelimitedList
    Default: "10.20.1.0/28, 10.20.2.0/28"
  azs:
    Type: CommaDelimitedList
    Default: "us-east-1c"
  secretkey:
    Type: String
    Default: "25r4QLtr56EqfxCVzEk3eHwS1lxhn6bWWEsYH8Ms"
  accesskey:
    Type: String
    Default: "AKIAXZXIY4Q4OQXSIESK"
```
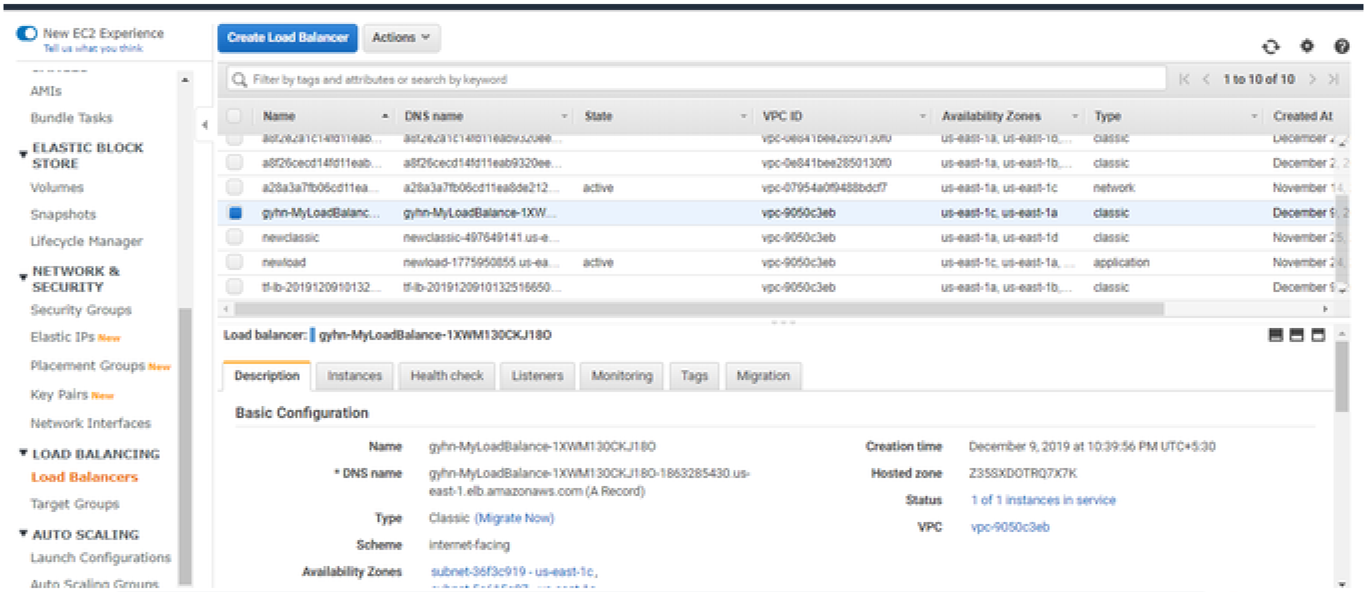



Name	DNS name	State	VPC ID	Availability Zones	Type	Created At
a6f2e2a1c14fd11eab...	a6f2e2a1c14fd11eab932ee...		vpc-0e841bee2850130f0	us-east-1a, us-east-1b,...	classic	December 2
a8f26cecd14fd11eab...	a8f26cecd14fd11eab9320ee...		vpc-0e841bee2850130f0	us-east-1a, us-east-1b,...	classic	December 2, 2
a28a3a7fb06cd11ea...	a28a3a7fb06cd11ea8de212...	active	vpc-07954a0f9488bdcf7	us-east-1a, us-east-1c	network	November 14,
gyhn-MyLoadBalanc...	gyhn-MyLoadBalance-1XW...		vpc-9050c3eb	us-east-1c, us-east-1a	classic	December 9, 2
newclassic	newclassic-497649141.us-e...		vpc-9050c3eb	us-east-1a, us-east-1d	classic	November 25,
newload	newload-1775950855.us-ea...	active	vpc-9050c3eb	us-east-1c, us-east-1a, ...	application	November 24,
tf-lb-2019120910132...	tf-lb-2019120910132516650...		vpc-9050c3eb	us-east-1a, us-east-1b,...	classic	December 9

Load balancer: gyhn-MyLoadBalance-1XWM130CKJ18O

Basic Configuration

Name gyhn-MyLoadBalance-1XWM130CKJ18O

* DNS name gyhn-MyLoadBalance-1XWM130CKJ18O-1863285430.us-east-1.elb.amazonaws.com (A Record)

Type Classic (Migrate Now)

Scheme internet-facing

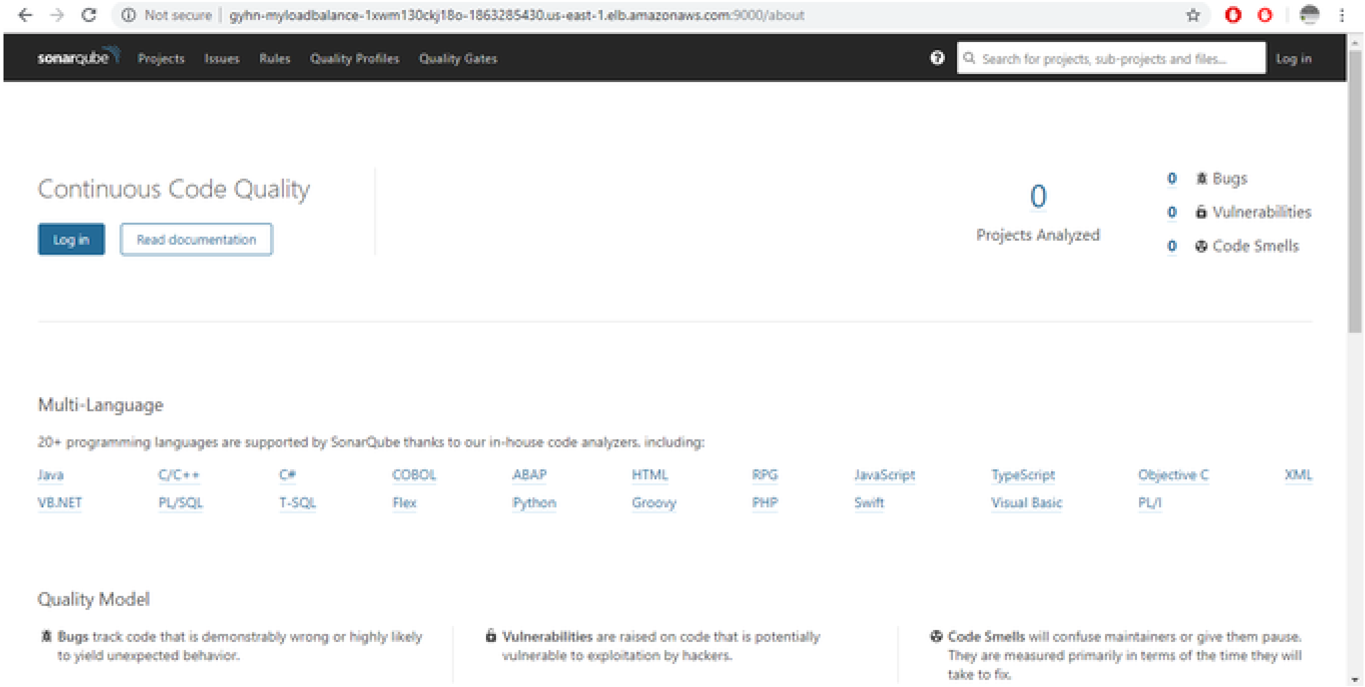
Availability Zones subnet-36f3c919 - us-east-1c,

Creation time December 9, 2019 at 10:39:56 PM UTC+5:30

Hosted zone Z35SXDOTRQ7X7K

Status 1 of 1 instances in service

VPC vpc-9050c3eb


Not secure | gyhn-myloadbalance-1xwm130ckj18o-1863285430.us-east-1.elb.amazonaws.com:9000/about

Continuous Code Quality

0 Projects Analyzed

0 Bugs

0 Vulnerabilities

0 Code Smells

Multi-Language

20+ programming languages are supported by SonarQube thanks to our in-house code analyzers, including:

Java, C/C++, C#, COBOL, ABAP, HTML, RPG, JavaScript, TypeScript, Objective C, XML, VB.NET, PL/SQL, T-SQL, Flex, Python, Groovy, PHP, Swift, Visual Basic, PL/I

Quality Model

Bugs track code that is demonstrably wrong or highly likely to yield unexpected behavior.

Vulnerabilities are raised on code that is potentially vulnerable to exploitation by hackers.

Code Smells will confuse maintainers or give them pause. They are measured primarily in terms of the time they will take to fix.

- Go to url and try the url with port number. you can see the sonar instance.
- To destroy the resource in aws, please go and delete the stack.

thats all done !!!