

Multiple Resources

1. In this lab we are going to see how to create a security group and EC2 instance from the same template file. We are talking about multiple resources. If you have multiple resources, we also may need to refer them. Like if you are creating security group, I want to refer it into my EC2 instance.
2. Now again on the CloudFormation I am going to upload my template. You can get this template from GitHub.

```
1  Resources:  
2    MyInstance:  
3      Type: AWS::EC2::Instance  
4      Properties:  
5          InstanceType: t2.micro  
6          ImageId: ami-06b72b3b2a773be2b  
7          Tags:  
8              - Key: "Name"  
9                  Value: !Join ["-", [demo, instance, from, cloudformation]]  
10         SecurityGroups:  
11             - !Ref DemoSG  
12  
13     DemoSG:  
14         Type: AWS::EC2::SecurityGroup  
15         Properties:  
16             GroupDescription: Allow ssh & http from Anywhere-IPv4  
17             SecurityGroupIngress:  
18                 - IpProtocol: tcp  
19                     FromPort: 80  
20                     ToPort: 80  
21                     CidrIp: 0.0.0.0/0  
22                 - IpProtocol: tcp  
23                     FromPort: 22  
24                     ToPort: 22  
25                     CidrIp: 0.0.0.0/0
```

3. Now upload your template and create your 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
Provide an Amazon S3 URL to your template. Upload a template file
Upload your template directly to the console. Sync from Git - new
Sync a template from your Git repository.

Upload a template file

multiple-resource.yaml X
JSON or YAML formatted file

S3 URL: <https://s3.ap-south-1.amazonaws.com/cf-templates-kmi81w4ukk76-ap-south-1/2024-02-21T132322.244Znyi-multiple-resource.yaml>

4. Now here you will see that first the stack is in progress then it started creating the security group after that our instance got created.
5. Then the stack got created successfully.

Timestamp	Logical ID	Status	Status reason
2024-02-21 18:54:28 UTC+0530	multiple-resources	CREATE_COMPLETE	-
2024-02-21 18:54:27 UTC+0530	MyInstance	CREATE_COMPLETE	-
2024-02-21 18:53:56 UTC+0530	MyInstance	CREATE_IN_PROGRESS	Resource creation Initiated
2024-02-21 18:53:55 UTC+0530	MyInstance	CREATE_IN_PROGRESS	-
2024-02-21 18:53:54 UTC+0530	DemoSG	CREATE_COMPLETE	-
2024-02-21 18:53:54 UTC+0530	DemoSG	CREATE_IN_PROGRESS	Resource creation Initiated
2024-02-21 18:53:49 UTC+0530	DemoSG	CREATE_IN_PROGRESS	-
2024-02-21 18:53:47 UTC+0530	multiple-resources	CREATE_IN_PROGRESS	User Initiated

6. Now if you will navigate to security groups you can see your security group and the inbound rules that you wanted to assign to it.

sg-0db41b99e5f8e878f - multiple-resources-DemoSG-7CSQBL0HBJ1Q

Inbound rules (2)

Name	Security group rule...	IP version	Type	Protocol	Port range	Source
-	sgr-0aa73f755b5b311f1	IPv4	SSH	TCP	22	0.0.0.0/0
-	sgr-0f0320730bcc2d5d5	IPv4	HTTP	TCP	80	0.0.0.0/0

7. Here is your instance that got created.

Instances (1/1) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Available
demo-instance-from-cloudformation	i-09798d472bc1416a8	Running	t2.micro	2/2 checks passed	View alarms	+ ap-sou

Instance: i-09798d472bc1416a8 (demo-instance-from-cloudformation)

Details Status and alarms New Monitoring Security Networking Storage Tags

Instance summary

Instance ID i-09798d472bc1416a8 (demo-instance-from-cloudformation)	Public IPv4 address 13.233.125.115 [open address]	Private IPv4 addresses 172.31.47.44
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-13-233-125-115.ap-south-1.compute.amazonaws.com [open address]

8. Once all it is done just delete your stack.