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## AWS CLI CloudFormation

### Creating a Stack

```
aws cloudformation create-stack --stack-name myteststack --template-body
file:///home/testuser/mytemplate.yml --parameters
ParameterKey=Parm1,ParameterValue=test1 ParameterKey=Parm2,ParameterValue=test2

aws cloudformation create-stack --stack-name s3-01c-cli-stack --template-body
'file:///01c-S3.yml' --parameters ParameterKey=BucketNameParam,ParameterValue=test-
cf-cli-bucket ParameterKey=EnvironmentName,ParameterValue=test
```

### Describing and Listing Your Stacks

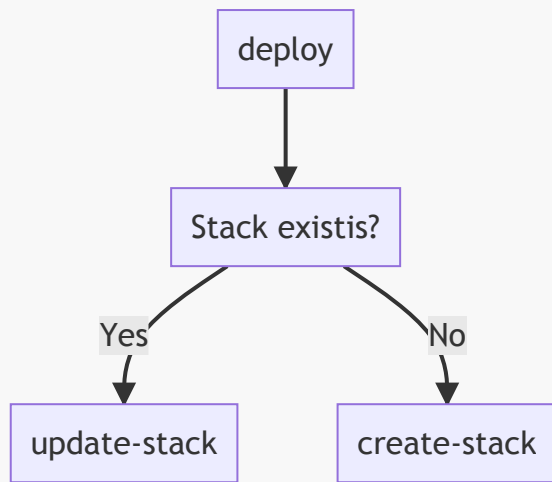
```
aws cloudformation list-stacks --stack-status-filter CREATE_COMPLETE

aws cloudformation list-stacks --stack-status-filter CREATE_COMPLETE --query
StackSummaries[0]

aws cloudformation list-stacks --stack-status-filter CREATE_COMPLETE --query
StackSummaries[0].[StackName,StackStatus]

aws cloudformation list-stacks --stack-status-filter CREATE_COMPLETE --query
StackSummaries[0].[StackName,StackStatus] --output json|text|tab
```

### Deploy a Stack using CLI



- **deploy** : check if stack exists, if stack exists -> update the stack, if stack is not present, it will create stack.

```
aws cloudformation deploy --template-file cf-template.yaml --stack-name mystackname --capabilities CAPABILITY_IAM
```

```
aws cloudformation deploy --stack-name s3-01c-cli-git-stack-deploy --template-file '01c-S3.yml' --parameter-overrides BucketNameParam=test-deploy-cf-cli-git-bucket EnvironmentName=test
```

```
aws cloudformation deploy --template-file /path_to_template/template.yml --stack-name my-new-stack --parameter-overrides Key1=Value1 Key2=Value2 --tags Key1=Value1 Key2=Value2
```

# Stack creation

```
aws cloudformation deploy --template-file 04a-IAM-EC2-Role.yml --stack-name dev-iam-ec2-stack --parameter-overrides KeyName=test-cf-key EnvironmentName=dev --capabilities CAPABILITY_NAMED_IAM
```

# Validate the stack in Console

# Make slight modifications to the above mentioned same template file.

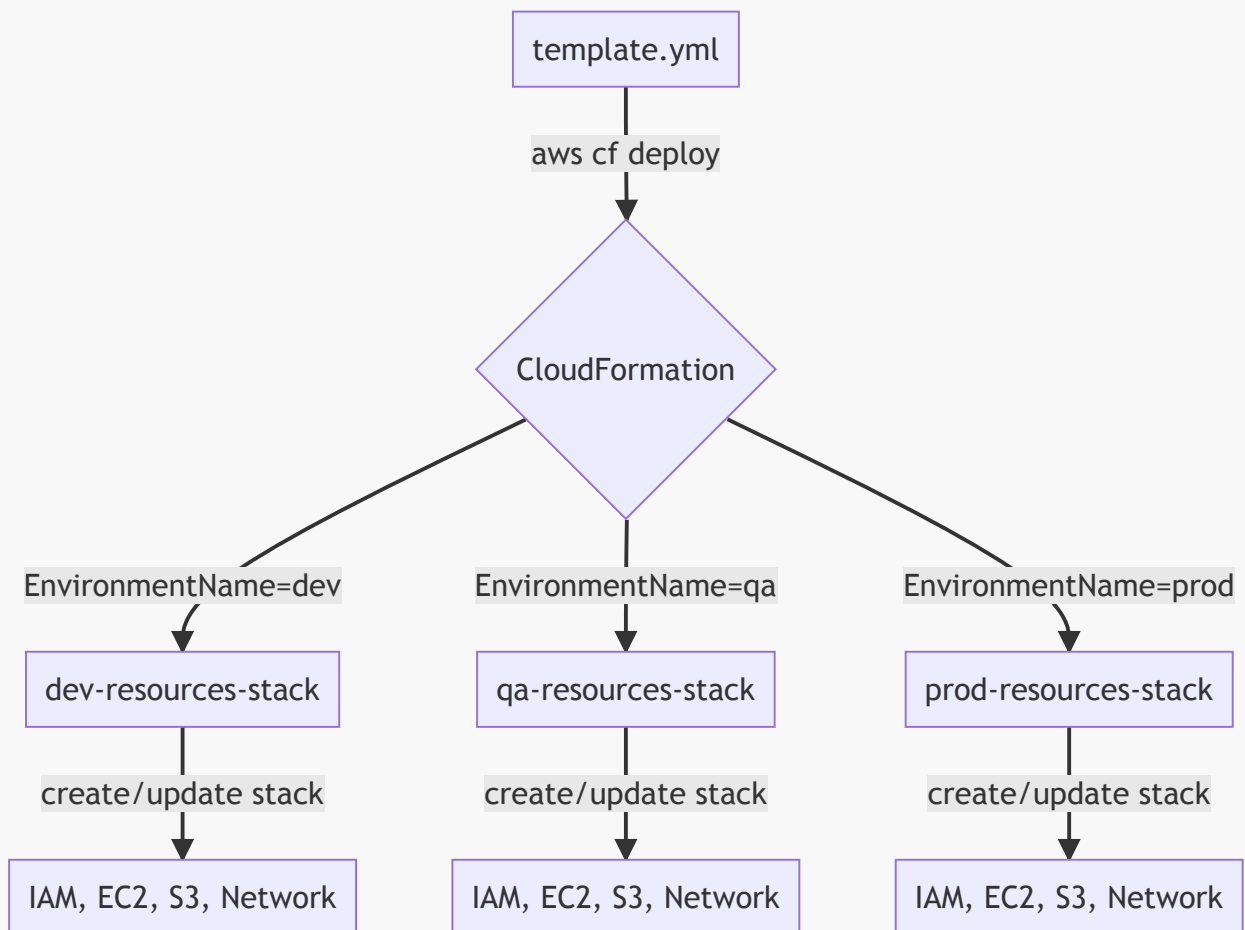
# Run the above deploy command again.

# Here, CF cli deploy command will check for stack with same name and update existing stack with the new template file.

# Here in above command, there is only one environment is created with Environment name as dev.

# Same Template will be used to create another environment using qa prefix.

```
aws cloudformation deploy --template-file 04a-IAM-EC2-Role.yml --stack-name qa-iam-ec2-stack --parameter-overrides KeyName=test-cf-key EnvironmentName=qa --capabilities CAPABILITY_NAMED_IAM
```



## Viewing Stack Event History

```
aws cloudformation describe-stack-events --stack-name s3-01c-cli-stack
```

## Listing Resources

```
aws cloudformation list-stack-resources --stack-name s3-01c-cli-stack
aws cloudformation list-stack-resources --stack-name VPC-03a-stack --query
StackResourceSummaries[*].[PhysicalResourceId,ResourceType]
```

## Validating a Template

- In S3

```
aws cloudformation validate-template --template-url
https://s3.amazonaws.com/cloudformation-templates-us-east-1/S3_Bucket.template
```

- In Local

```
aws cloudformation validate-template --template-body file:///sampletemplate.yml

# Using a loop to validate all templates in a directory
for i in $(ls | grep -i '.yaml'); do echo "$i"; aws cloudformation validate-
template --template-body file:///.$i; done;
```

## Deleting a Stack

```
aws cloudformation delete-stack --stack-name prod1-ec2-stack
```

## Stack Drift

### Detect CloudFormation Stack Drift

- Enter the stack name and stack drift id.

```
aws cloudformation detect-stack-drift --stack-name <CF_STACK_NAME>
aws cloudformation detect-stack-drift --stack-name VPC-03a-stack
```

### Describe CloudFormation Stack Drift

```
aws cloudformation describe-stack-drift-detection-status --stack-drift-detection-
id <STACK_DRIFT_ID>

aws cloudformation describe-stack-drift-detection-status --stack-drift-detection-
id 35428480-2189-11eb-9eee-0e13b4bbfae7
```

### View Stack Resources Drift

- When the stack drift detection operation is complete, use the describe-stack-resource-drifts command to review the results, including actual and expected property values for resources that have drifted.

```
aws cloudformation describe-stack-resource-drifts --stack-name VPC-03a-stackVPC-
03a-stack
```