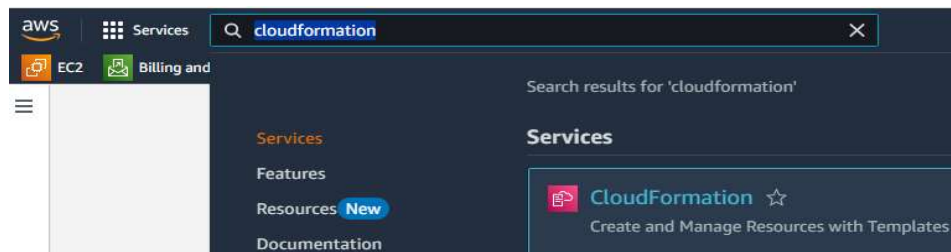


AWS CloudFormation:

- AWS CloudFormation is an Infrastructure as Code (IaC) service that lets you define, provision and manage AWS resources in a declarative, template-based format.
- It enables you to create and provision AWS infrastructure deployments predictably and repeatedly.
- It helps you leverage AWS products such as Amazon EC2, Amazon Elastic Block Store, Amazon SNS, Elastic Load Balancing, and Auto Scaling to build highly reliable, highly scalable, cost-effective applications in the cloud without worrying about creating and configuring the underlying AWS infrastructure.
- AWS CloudFormation enables you to use a template file to create and delete a collection of resources together as a single unit (a stack).
- The template file can be written in JSON or YAML format.

Steps:

1. Login to AWS Console as root user and search for cloudformation under Services.



Stack:

- A stack is a collection of AWS resources that you can manage as a single unit. In other words, you can create, update, and delete a collection of resources by creating, updating, and deleting stacks.
 - Creating a stack involves deploying a CloudFormation template that specifies the resources and their configurations, with CloudFormation then provisions and configures.
 - Updating a stack involves making changes to the template or parameters.
2. Create a Stack by clicking on **Create Stack** button.

Create stack

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

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.

☒ **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 Info
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

Choose file

cloud-formation.yml

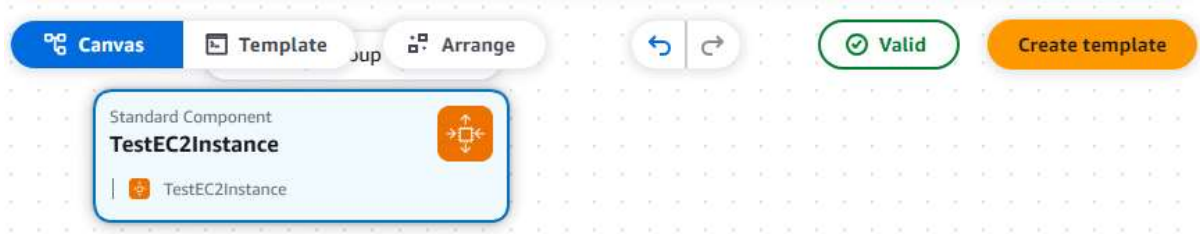
JSON or YAML formatted file

S3 URL: <https://s3.ap-south-1.amazonaws.com/cf-templates-ctnts9yb0z17-ap-south-1/2024-11-08T000851.780Zlpw-cloud-formation.yml>

View in Infrastructure Composer

Cancel **Next**

- Click on **View in Infrastructure Composer** button. Here we can validate the template.



- Click on **Create Template and Confirm and Continue to Cloud Formation**.
- After clicking on **Next**, we can specify the stack name and then click on Next:

Specify stack details

Provide a stack name

Stack name

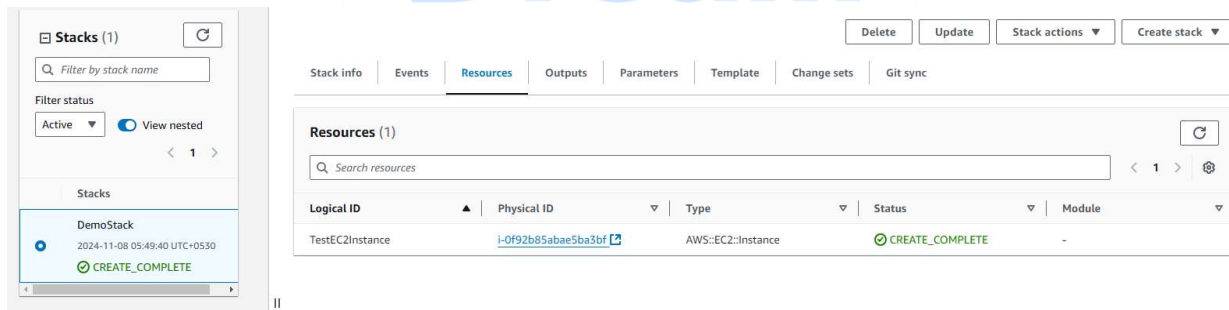
Stack name must be 1 to 128 characters, start with a letter, and only contain alphanumeric characters. Character count: 9/128.

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

No parameters
 There are no parameters defined in your template

Cancel Previous **Next**

- Next page can display about **Configure stack options**, don't change anything here.
- Don't change anything on **Review and create** page, and click on **Submit**.
- Now you can verify one EC2 instance will be up and running.



Stacks (1)

Filter by stack name

Filter status: Active View nested

Stacks

Stack name	Created	Status
DemoStack	2024-11-08 05:49:40 UTC+0530	CREATE_COMPLETE

Resources (1)

Search resources

Logical ID	Physical ID	Type	Status	Module
TestEC2Instance	i-0f92b85abae5ba3bf	AWS::EC2::Instance	CREATE_COMPLETE	-

Instances (1) Info

Find Instance by attribute or tag (case-sensitive) All states

Name	Instance ID	Instance state	Instance type
TestServer	i-0f92b85abae5ba3bf	Running	t2.micro

Cloud Formation Template: It is the template which helps us creating resources in AWS.

Example:

Resources:

TestEC2Instance:

Type: "AWS::EC2::Instance"

Properties:

InstanceType: t2.micro

ImageId: ami-08bf489a05e916bbd

Tags:

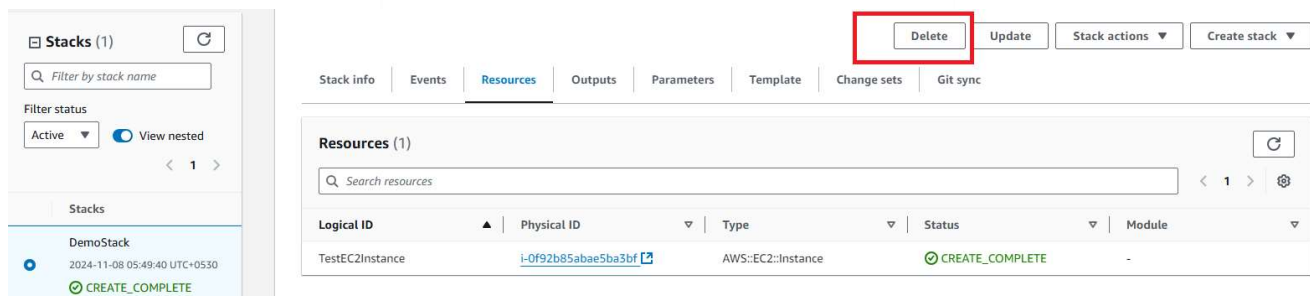
- Key: Name

Value: TestServer

Copy the content and save to a file with extension as yml or yaml.

Deleting the Instance:

Select the stack and click on Delete button.



The screenshot shows the AWS CloudFormation console. On the left, there is a sidebar with 'Stacks (1)' and a list of stacks. The main area shows the 'Resources' tab for a selected stack. The 'Delete' button is highlighted with a red box. Below the 'Delete' button, there are tabs for 'Stack info', 'Events', 'Resources', 'Outputs', 'Parameters', 'Template', 'Change sets', and 'Git sync'. The 'Resources' tab is active, showing a table of resources.

Logical ID	Physical ID	Type	Status	Module
TestEC2Instance	i-0f92b85bae5ba3bf	AWS::EC2::Instance	CREATE_COMPLETE	-

Now, if we check the instance, it must get deleted.