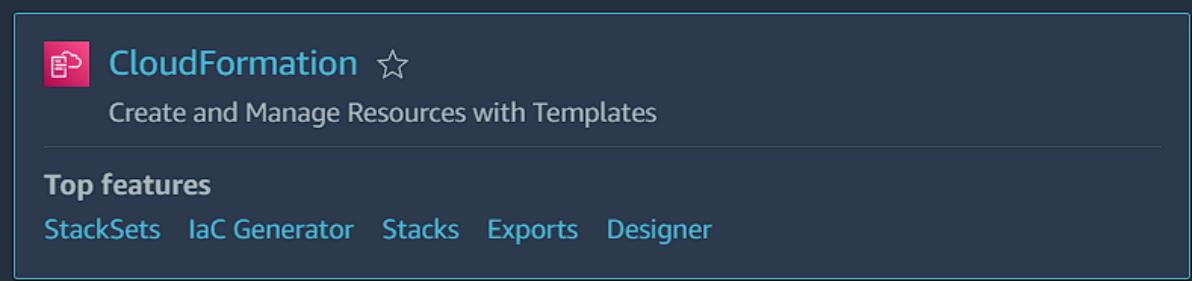


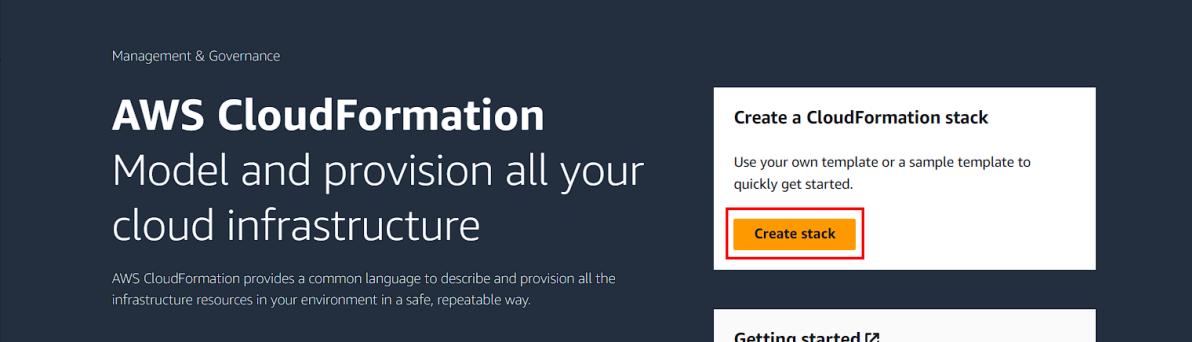
# CloudFormation

1. Login to AWS Console and navigate to cloud formation. Choose this service accordingly.

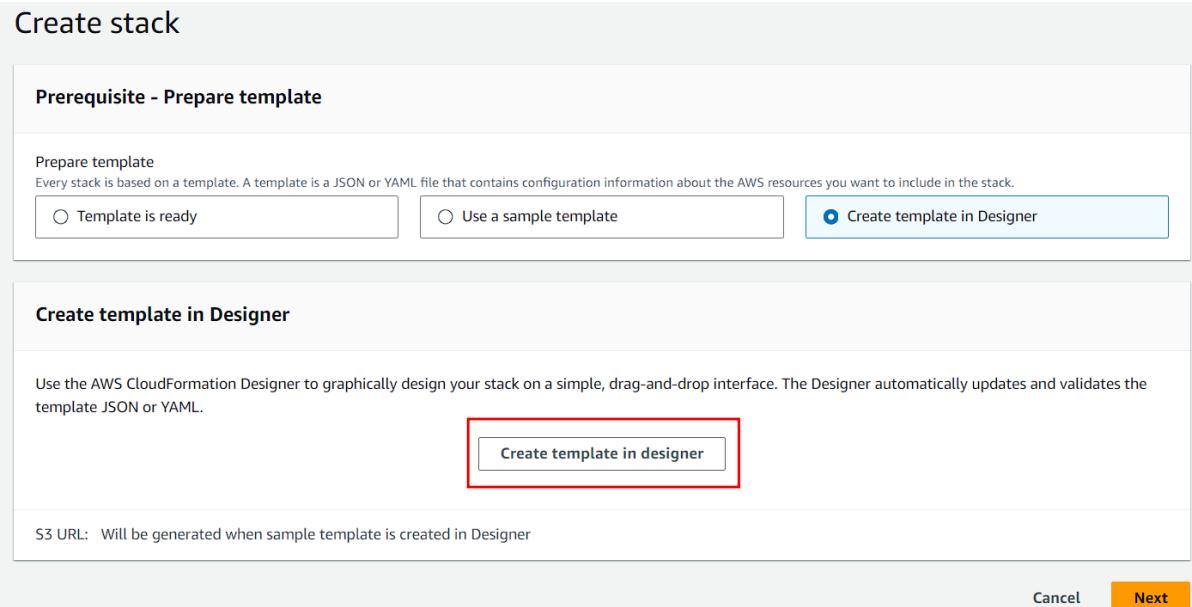


The screenshot shows the AWS CloudFormation dashboard. At the top, there's a navigation bar with a CloudFormation icon and the text "CloudFormation ☆". Below it, a sub-header says "Create and Manage Resources with Templates". Underneath, a section titled "Top features" lists "StackSets", "IaC Generator", "Stacks", "Exports", and "Designer".

2. On the dashboard of cloud formation, click on create stack. Then it will ask you for templates but you don't have any. So now, select create template in designer and click on it.



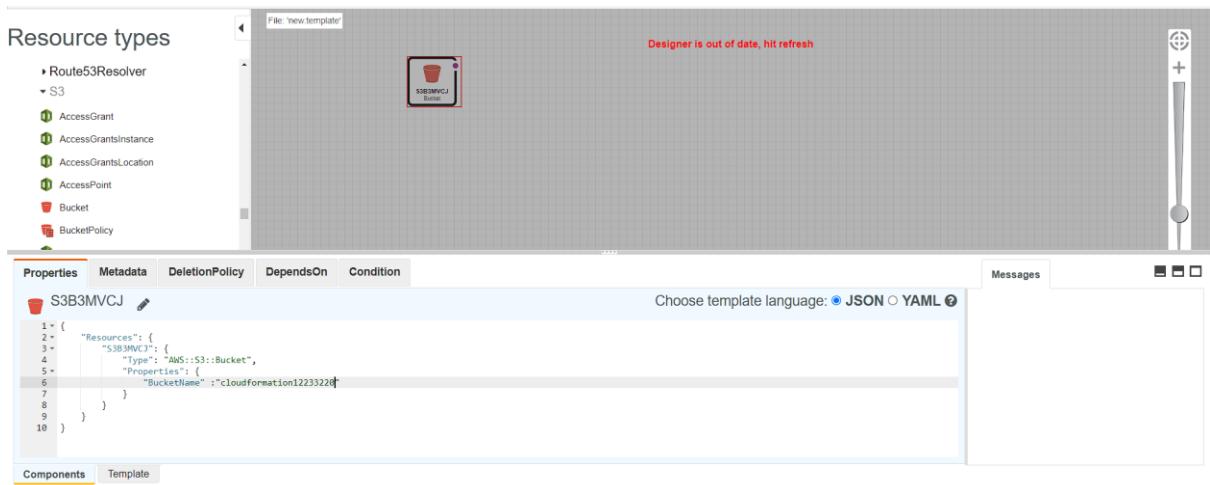
The screenshot shows the "Create a CloudFormation stack" wizard. The first step, "Prerequisite - Prepare template", asks for a template source. It provides three options: "Template is ready" (radio button), "Use a sample template" (radio button), and "Create template in Designer" (radio button, which is selected and highlighted with a red box). Below this, a note states: "AWS CloudFormation provides a common language to describe and provision all the infrastructure resources in your environment in a safe, repeatable way." To the right, a "Getting started" link is visible.



The screenshot shows the "Create template in Designer" wizard. It starts with a note: "Use the AWS CloudFormation Designer to graphically design your stack on a simple, drag-and-drop interface. The Designer automatically updates and validates the template JSON or YAML." Below this is a large button labeled "Create template in designer", which is highlighted with a red box. At the bottom, a note says "S3 URL: Will be generated when sample template is created in Designer". At the very bottom right, there are "Cancel" and "Next" buttons.

3. Now form the left in resource types scroll down to S3, then expand it and drag the bucket option to the right.
4. After that click on bucket and you will see the properties, you can see the JSON code.

- In the you need to specify the bucket name and it should be unique.



- After that from the top left corner click on the highlighted icon. It will validate your template.
- Now go back to stack creation page and choose to create your stack.



- Now cloud formation is going to take that template. And upload it onto another S3 pocket. So, it's going to create its own S3 pocket for storing these templates and then it will deploy the templates from the S3 bucket. So, this service will create its own S3 bucket within your account.
- Now just click on next.

**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.

Amazon S3 URL  
<https://s3.ap-south-1.amazonaws.com/cf-templates-kmi81w4ukk76-ap-south-1/2024046rXn-new.templateniklilp03q8>

Amazon S3 template URL

S3 URL: <https://s3.ap-south-1.amazonaws.com/cf-templates-kmi81w4ukk76-ap-south-1/2024046rXn-new.templateniklilp03q8>   [View in Designer](#)

[Cancel](#)   [Next](#)

10. Give a stack name and click on next.

Specify stack details

Provide a stack name

Stack name  
demos3stack

Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

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

11. Now on the next page you need to specify an IAM role. For that you need to create it.

Configure stack options

Tags

You can specify tags (key-value pairs) to apply to resources in your stack. 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

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 C

12. Navigate to IAM and click on create roles. There int eh service choose cloud formation.

Use case

Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

Service or use case

CloudFormation

Choose a use case for the specified service.

Use case

CloudFormation  
Allows CloudFormation to create and manage AWS stacks and resources on your behalf.

Cancel Next

13. Then give it the permission for S3 full access and create your role.

Policy name: AmazonS3FullAccess

Type: AWS managed

Description: Provides full access to all buckets via the S3 API.

Set permissions boundary - optional

Cancel Previous Next

14. After that open your role and copy its complete ARN and then navigate to cloud formation.
15. Now paste you ARN here in cloud formation. Also choose IAM role ARN.
16. After that just leave everything as they are and go to the review page and create your stack.

**Permissions**

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

IAM role ARN: arn:aws:iam::878893308172:role/cloudformations3fullaccess

Remove

**⚠️** AWS CloudFormation will use this role for all stack operations. Other users that have permissions to operate on this stack will be able to use this role, even if they don't have permission to pass it. Ensure that this role grants least privilege.

17. It might take some time to create your stack.

CloudFormation > Stacks > demos3stack

**demos3stack**

Stacks (1)

Filter status: Active

View nested

Stacks

demos3stack

2024-02-15 19:13:02 UTC+0530

Events (1)

Timestamp: 2024-02-15 19:13:02 UTC+0530

Logical ID: demos3stack

Status: CREATE\_IN\_PROGRESS

Status reason: User Initiated

18. Once your creation is complete now navigate to S3.

The screenshot shows the AWS CloudFormation console with the 'Events' tab selected for the stack 'demos3stack'. The table displays the following events:

Timestamp	Logical ID	Status	Status reason
2024-02-15 19:13:34 UTC+0530	demos3stack	CREATE_COMPLETE	-
2024-02-15 19:13:33 UTC+0530	S3B3MVCJ	CREATE_COMPLETE	-
2024-02-15 19:13:07 UTC+0530	S3B3MVCJ	CREATE_IN_PROGRESS	Resource creation Initiated
2024-02-15 19:13:04 UTC+0530	S3B3MVCJ	CREATE_IN_PROGRESS	-
2024-02-15 19:13:02 UTC+0530	demos3stack	CREATE_IN_PROGRESS	User Initiated

19. You will see that other the 4 buckets that I already had, now I have two additional buckets.

The screenshot shows the AWS S3 console displaying a list of general-purpose buckets. Two specific buckets are highlighted with a red box:

- cf-templates-kni81w4ukk76-ap-south-1
- cloudformation12233220

Name	AWS Region	Access	Creation date
cf-templates-kni81w4ukk76-ap-south-1	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	February 15, 2024, 19:03:14 (UTC+05:30)
cloudformation12233220	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	February 15, 2024, 19:13:11 (UTC+05:30)
demouser1221	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	February 11, 2024, 19:01:41 (UTC+05:30)
demouser1222	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	February 11, 2024, 19:01:59 (UTC+05:30)
demouser1223	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	February 11, 2024, 19:02:16 (UTC+05:30)
demouser1224	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	February 11, 2024, 19:02:29 (UTC+05:30)

20. What we have done is has code in terms of JSON. We have defined a template in the template we mentioned the properties of an S3 bucket. We then submitted that template onto CloudFormation, and CloudFormation created the resource for us.
21. In order to delete your resources, you just need to delete your stack it will clean all other resources for you even the S3 bucket.
22. But you are needed to delete the templates bucket, first empty that then delete it.