

# Intrinsic Function

1. In this lab you are going to learn about a function for string which will join a comma separated list into strings.
2. Again, for this lab you are going to use a template which you can get from GitHub.
3. Now, to begin with here is the code, it is more or less similar with the previous code.
4. **Value: !Join ["-", [demo, instance, from, cloudformation]]:** This specifies the value of the tag.
5. **!Join:** This is an intrinsic function in CloudFormation that concatenates a list of strings into a single string using a specified delimiter.  
["-", [demo, instance, from, cloudformation]]: This is a list where each element represents a string to be concatenated, and "-" is the delimiter. So, it will concatenate the strings "demo", "instance", "from", and "cloudformation", separated by hyphens ("-").

```
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]]
```

6. Now upload this code in CloudFormation and after that give it a name then just create your stack and wait for some time.

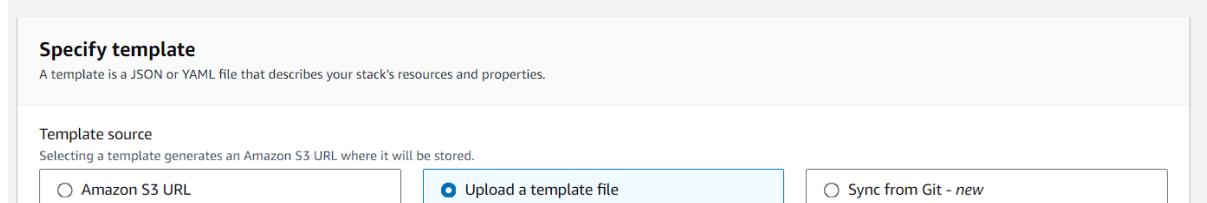


Prerequisite - Prepare template

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

functions.yaml X

JSON or YAML formatted file

S3 URL: <https://s3.ap-south-1.amazonaws.com/cf-templates-kmi81w4ukk76-ap-south-1/2024-02-20T170713.110Z589-functions.yaml>

7. Now wait for some time until you stack get created successfully.
8. Once you stack is created, go to EC2 and check for your instance.

The screenshot shows the AWS CloudFormation console with the 'demo-function' stack selected. The 'Events' tab is active, showing the following log entries:

Timestamp	Logical ID	Status	Status reason
2024-02-20 22:38:24 UTC+0530	demo-function	<span>CREATE_COMPLETE</span>	-
2024-02-20 22:38:23 UTC+0530	MyInstance	<span>CREATE_COMPLETE</span>	-
2024-02-20 22:37:52 UTC+0530	MyInstance	<span>CREATE_IN_PROGRESS</span>	Resource creation Initiated
2024-02-20 22:37:51 UTC+0530	MyInstance	<span>CREATE_IN_PROGRESS</span>	-
2024-02-20 22:37:48 UTC+0530	demo-function	<span>CREATE_IN_PROGRESS</span>	User Initiated

9. Here you can see that your instance has been created with proper tag.

The screenshot shows the AWS EC2 Instances page with one instance listed:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
demo-instance-from-cloudformation	i-01184aea524242dfe	<span>Running</span>	t2.micro	<span>Initializing</span>	View alarms	ap-south-1

Details for the instance:

- Instance summary: Instance ID i-01184aea524242dfe (demo-instance-from-cloudformation)
- Public IPv4 address: 13.201.34.195
- Private IPv4 address: 172.31.38.116
- Public IPv4 DNS: ec2-13-201-34-195.ap-south-1.compute.amazonaws.com
- Instance state: Running

10. You can check the tags options also.

The screenshot shows the 'Tags' tab for the instance details page. The tags listed are:

Key	Value
aws:cloudformation:stack-name	demo-function
Name	demo-instance-from-cloudformation
aws:cloudformation:logical-id	MyInstance
aws:cloudformation:stack-id	arn:aws:cloudformation:ap-south-1:878893308172:stack/demo-function/92f6a350-d012-11ee-9274-0a3f7cbb8753

11. Now just delete your stack once you are done.