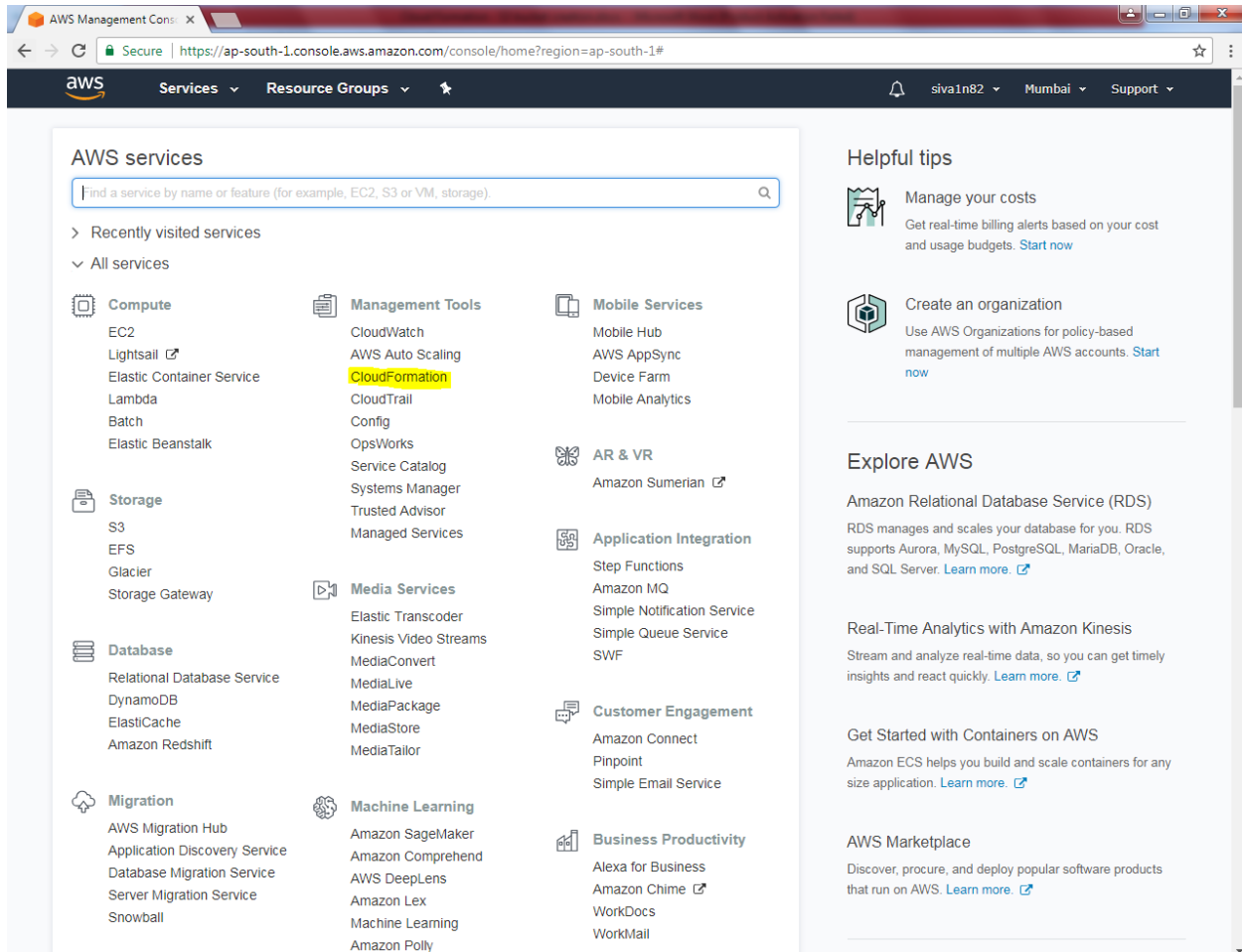


## Lab20

### Cloud Formaton – S3 bucket creation



The screenshot shows the AWS Management Console interface. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and user information. The main content area is titled 'AWS services' and features a search bar. Below the search bar, there are sections for 'Recently visited services' and 'All services'. The 'All services' section is organized into categories: Compute, Storage, Database, Migration, Management Tools, Media Services, Machine Learning, Mobile Services, AR & VR, Application Integration, Customer Engagement, and Business Productivity. The 'CloudFormation' service is highlighted in the 'Management Tools' category. On the right side of the console, there are 'Helpful tips' and 'Explore AWS' sections, which provide links to various AWS services and documentation.

**AWS services**

Find a service by name or feature (for example, EC2, S3 or VM, storage).

> Recently visited services

✓ All services

- Compute**
  - EC2
  - Lightsail
  - Elastic Container Service
  - Lambda
  - Batch
  - Elastic Beanstalk
- Storage**
  - S3
  - EFS
  - Glacier
  - Storage Gateway
- Database**
  - Relational Database Service
  - DynamoDB
  - ElastiCache
  - Amazon Redshift
- Migration**
  - AWS Migration Hub
  - Application Discovery Service
  - Database Migration Service
  - Server Migration Service
  - Snowball
- Management Tools**
  - CloudWatch
  - AWS Auto Scaling
  - CloudFormation**
  - CloudTrail
  - Config
  - OpsWorks
  - Service Catalog
  - Systems Manager
  - Trusted Advisor
  - Managed Services
- Media Services**
  - Elastic Transcoder
  - Kinesis Video Streams
  - MediaConvert
  - MediaLive
  - MediaPackage
  - MediaStore
  - MediaTailor
- Machine Learning**
  - Amazon SageMaker
  - Amazon Comprehend
  - AWS DeepLens
  - Amazon Lex
  - Machine Learning
  - Amazon Polly
- Mobile Services**
  - Mobile Hub
  - AWS AppSync
  - Device Farm
  - Mobile Analytics
- AR & VR**
  - Amazon Sumerian
- Application Integration**
  - Step Functions
  - Amazon MQ
  - Simple Notification Service
  - Simple Queue Service
  - SWF
- Customer Engagement**
  - Amazon Connect
  - Pinpoint
  - Simple Email Service
- Business Productivity**
  - Alexa for Business
  - Amazon Chime
  - WorkDocs
  - WorkMail

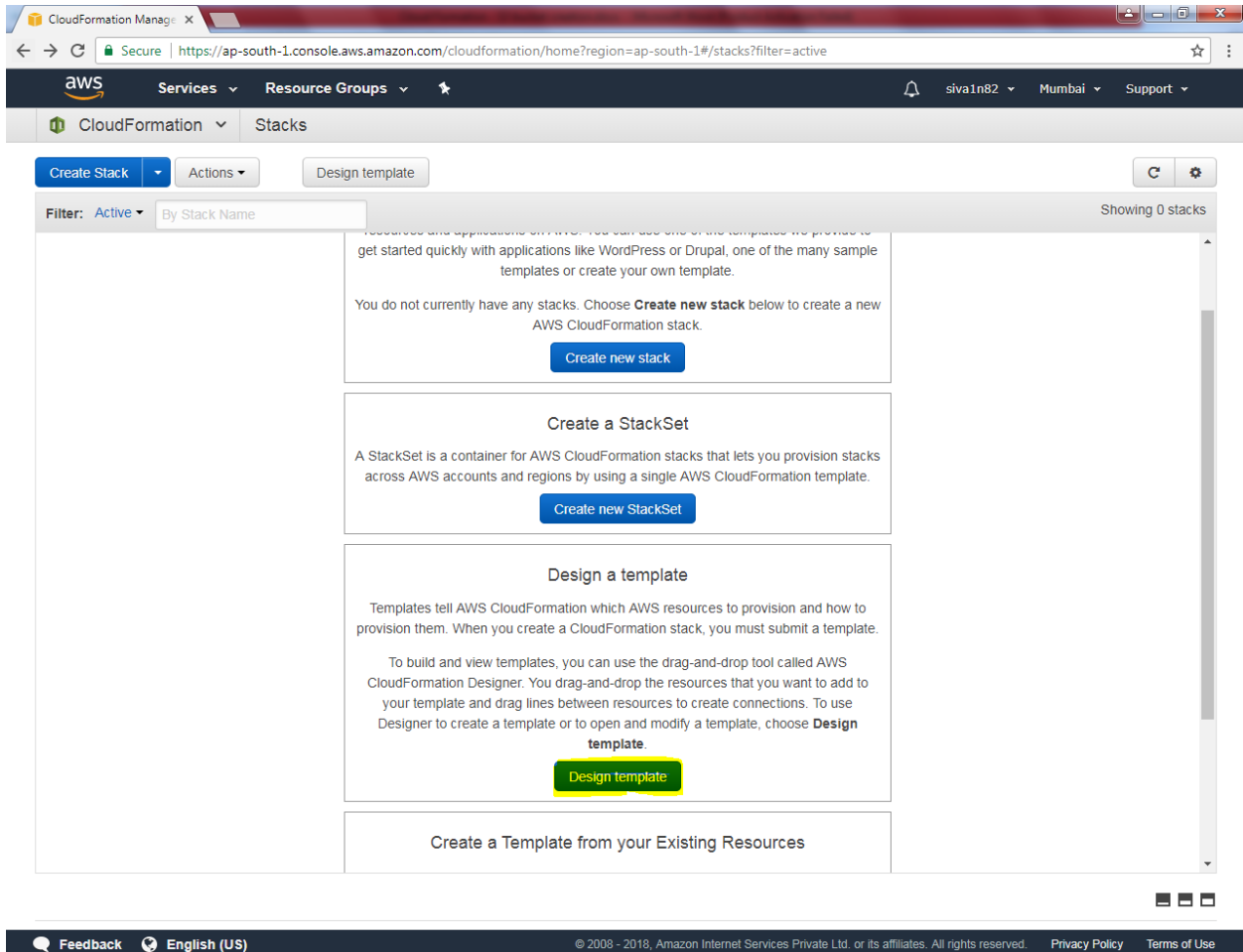
**Helpful tips**

- Manage your costs**  
Get real-time billing alerts based on your cost and usage budgets. [Start now](#)
- Create an organization**  
Use AWS Organizations for policy-based management of multiple AWS accounts. [Start now](#)

**Explore AWS**

- Amazon Relational Database Service (RDS)**  
RDS manages and scales your database for you. RDS supports Aurora, MySQL, PostgreSQL, MariaDB, Oracle, and SQL Server. [Learn more](#)
- Real-Time Analytics with Amazon Kinesis**  
Stream and analyze real-time data, so you can get timely insights and react quickly. [Learn more](#)
- Get Started with Containers on AWS**  
Amazon ECS helps you build and scale containers for any size application. [Learn more](#)
- AWS Marketplace**  
Discover, procure, and deploy popular software products that run on AWS. [Learn more](#)

Click “Design template”.



The screenshot shows the AWS CloudFormation console interface. At the top, there's a navigation bar with the AWS logo, 'Services', 'Resource Groups', and a user profile 'siva1n82' in 'Mumbai'. Below this, the 'CloudFormation' section is active, showing the 'Stacks' page. The page has a filter set to 'Active' and a search bar. The main content area displays four options: 'Create new stack', 'Create a StackSet', 'Design a template' (highlighted with a yellow box), and 'Create a Template from your Existing Resources'. The 'Design a template' option includes a brief description and a 'Design template' button.

CloudFormation Manage x

Secure | <https://ap-south-1.console.aws.amazon.com/cloudformation/home?region=ap-south-1#/stacks?filter=active>

aws Services Resource Groups

CloudFormation Stacks

Create Stack Actions Design template

Filter: Active By Stack Name Showing 0 stacks

Resources and applications on AWS. You can use one of the templates we provide to get started quickly with applications like WordPress or Drupal, one of the many sample templates or create your own template.

You do not currently have any stacks. Choose **Create new stack** below to create a new AWS CloudFormation stack.

Create new stack

Create a StackSet

A StackSet is a container for AWS CloudFormation stacks that lets you provision stacks across AWS accounts and regions by using a single AWS CloudFormation template.

Create new StackSet

Design a template

Templates tell AWS CloudFormation which AWS resources to provision and how to provision them. When you create a CloudFormation stack, you must submit a template.

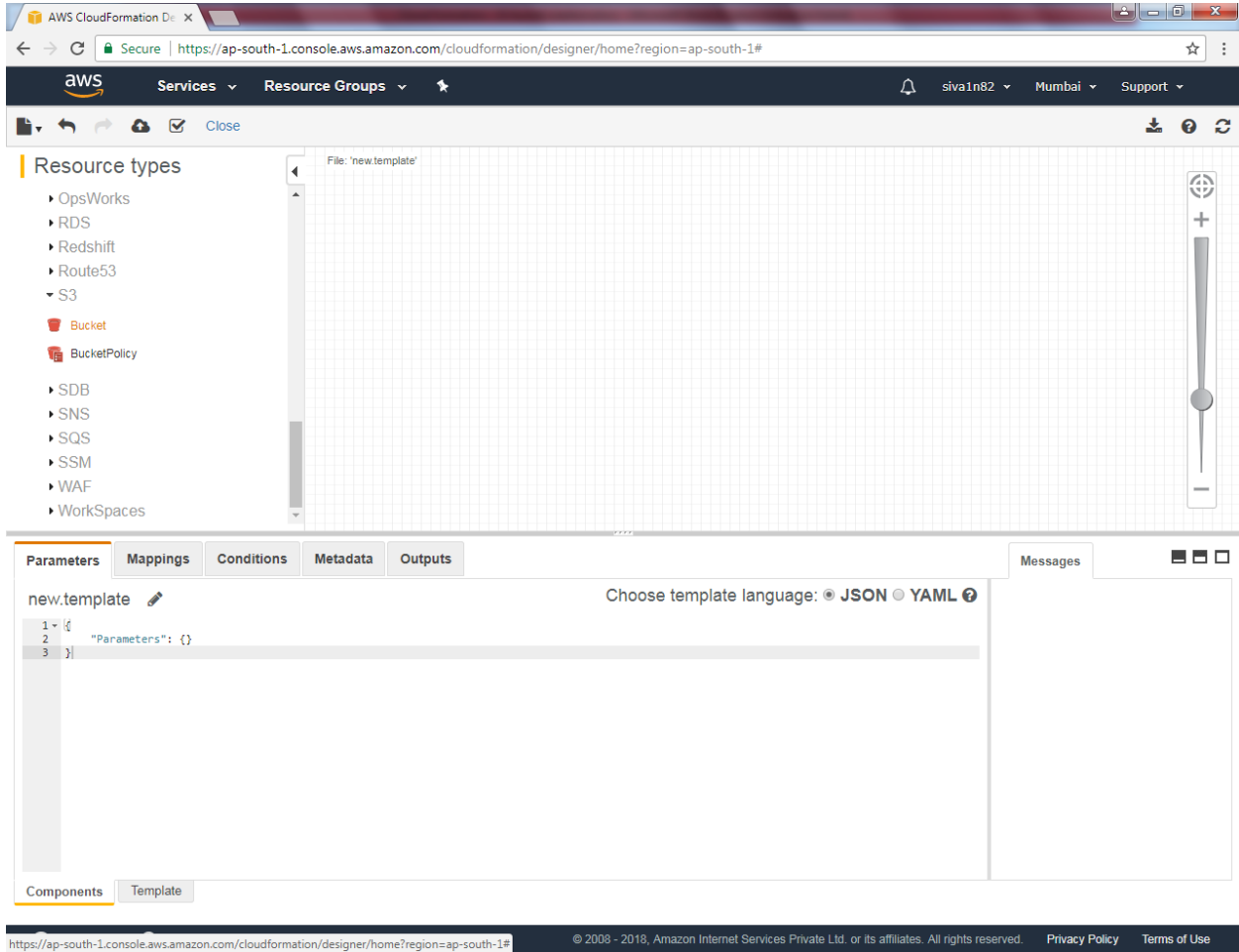
To build and view templates, you can use the drag-and-drop tool called AWS CloudFormation Designer. You drag-and-drop the resources that you want to add to your template and drag lines between resources to create connections. To use Designer to create a template or to open and modify a template, choose **Design template**.

Design template

Create a Template from your Existing Resources

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Select S3 and click “Bucket”.

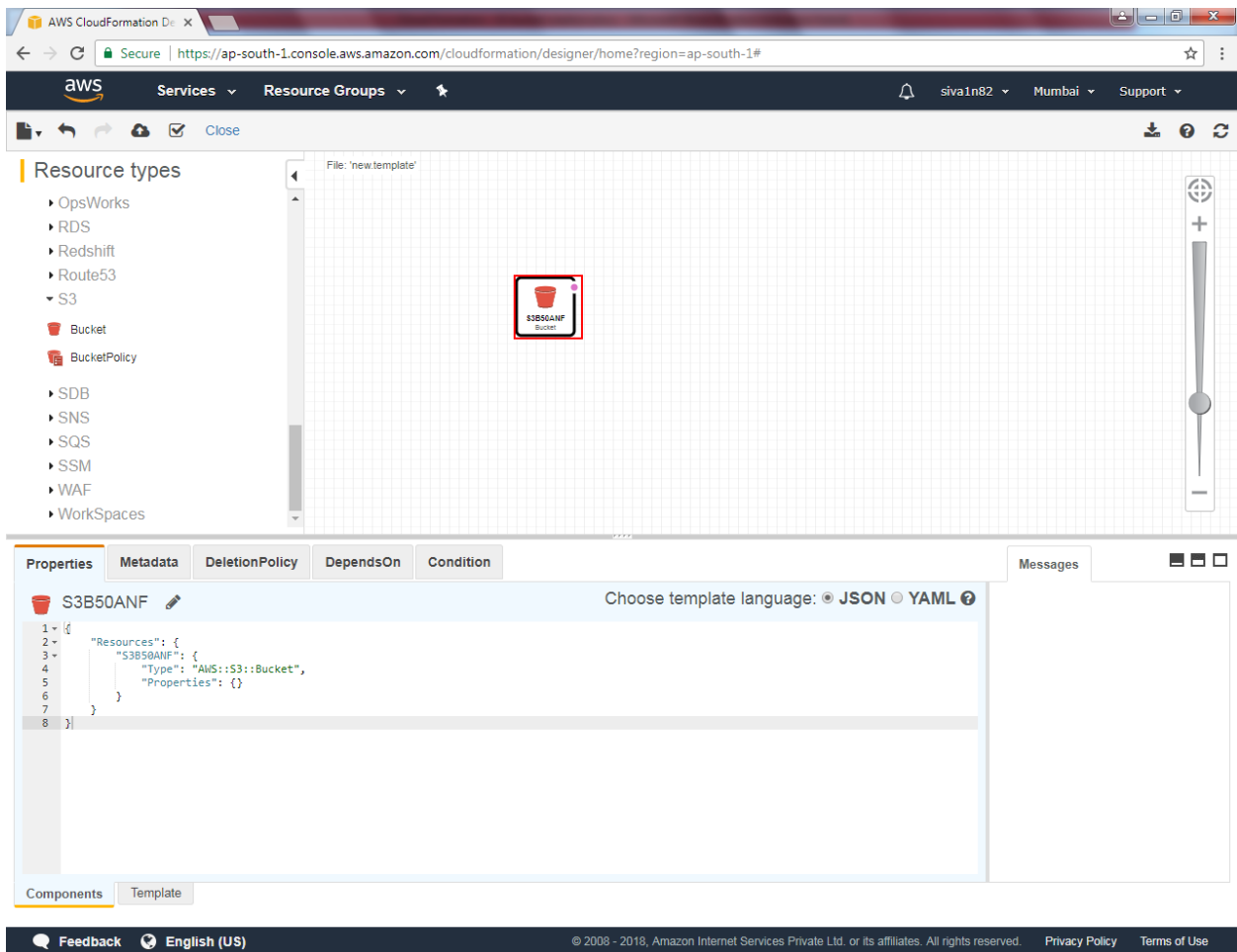


The screenshot shows the AWS CloudFormation Designer interface in a web browser. The browser address bar displays the URL: <https://ap-south-1.console.aws.amazon.com/cloudformation/designer/home?region=ap-south-1#>. The AWS logo and navigation menu are at the top. On the left, under "Resource types", the "S3" category is expanded, and the "Bucket" resource type is highlighted with a red icon. The main canvas is a grid with a file named "new.template" open. At the bottom, the "Parameters" tab is active, showing a JSON snippet: 

```
1 {  
2   "Parameters": {}  
3 }
```

. The "Choose template language" dropdown is set to "JSON". The footer contains the URL, copyright information (© 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.), and links to "Privacy Policy" and "Terms of Use".

Drag bucket into designer.

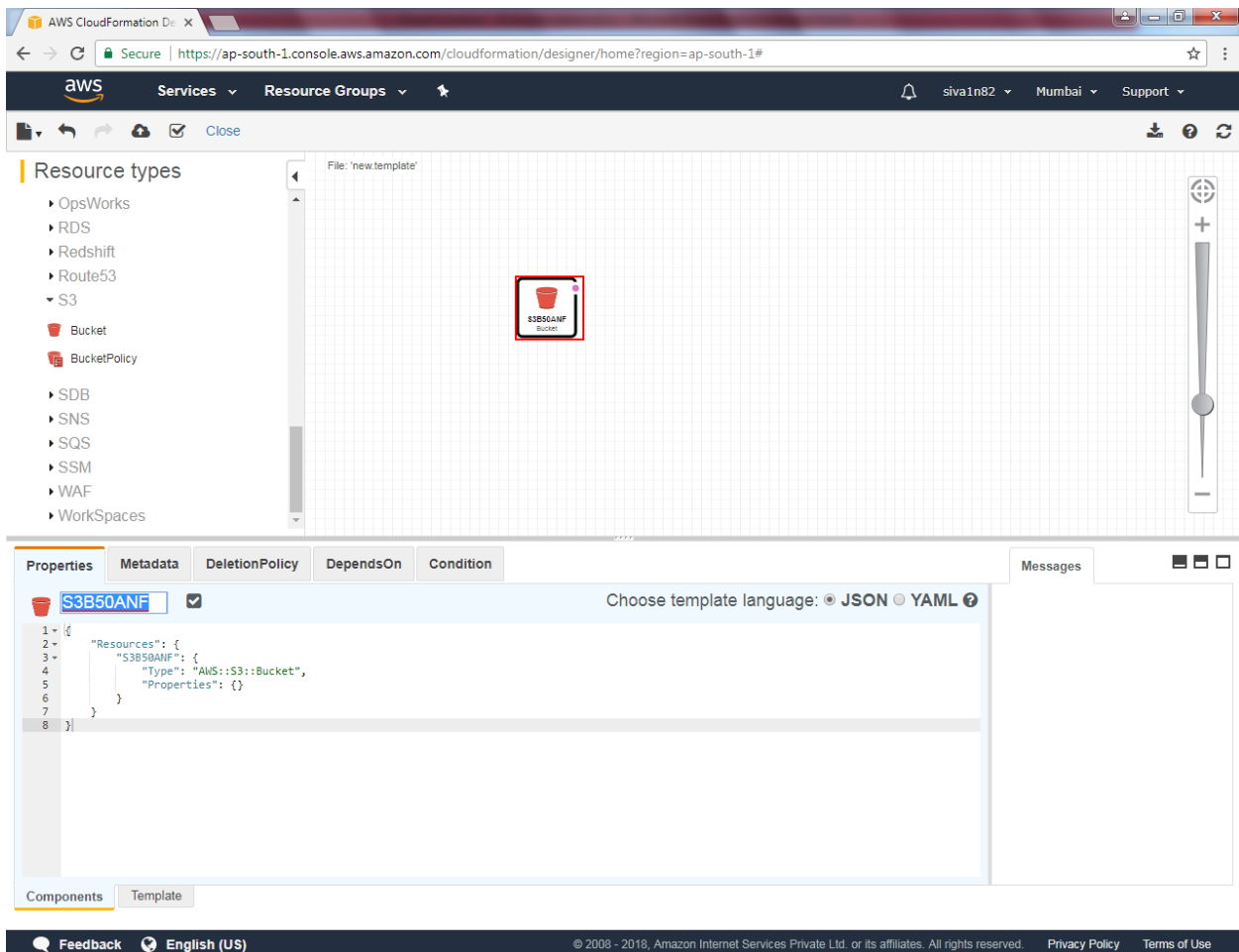


The screenshot displays the AWS CloudFormation Designer interface in a web browser. The browser's address bar shows the URL: `https://ap-south-1.console.aws.amazon.com/cloudformation/designer/home?region=ap-south-1#`. The interface includes a top navigation bar with the AWS logo, 'Services', 'Resource Groups', and user information. On the left, a 'Resource types' sidebar lists various AWS services, with 'S3' expanded to show 'Bucket' and 'BucketPolicy'. The main canvas, titled 'File: new.template', features a grid where a 'S3B50ANF Bucket' icon is being dragged. Below the canvas, the 'Properties' tab is active, showing the JSON template for the 'S3B50ANF' resource. The template code is as follows:

```
1 {  
2   "Resources": {  
3     "S3B50ANF": {  
4       "Type": "AWS::S3::Bucket",  
5       "Properties": {}  
6     }  
7   }  
8 }
```

At the bottom of the interface, there are links for 'Feedback', 'English (US)', and copyright information: '© 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.' along with 'Privacy Policy' and 'Terms of Use'.

Click Bucket name and type new bucket name.



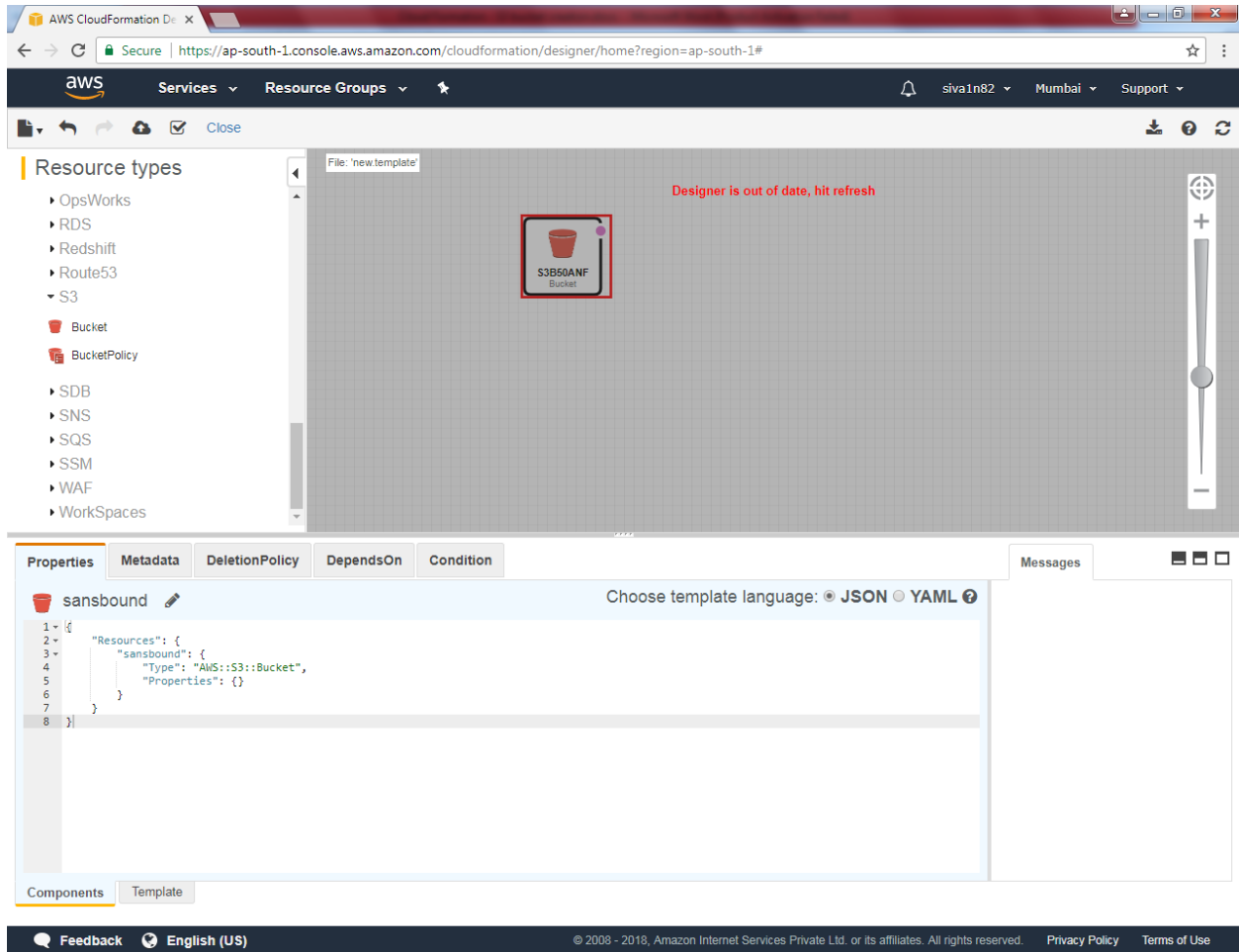
The screenshot shows the AWS CloudFormation Designer interface. On the left, the 'Resource types' sidebar lists various AWS services, with 'S3' expanded to show 'Bucket' and 'BucketPolicy'. In the center canvas, a red box highlights a new 'S3B50ANF' bucket resource being added to the template. Below the canvas, the 'Properties' tab is active, showing the JSON template code for the bucket. The code is as follows:

```
1 {  
2   "Resources": {  
3     "S3B50ANF": {  
4       "Type": "AWS::S3::Bucket",  
5       "Properties": {}  
6     }  
7   }  
8 }
```

The 'Choose template language' dropdown is set to 'JSON'. The bottom of the interface shows the 'Feedback' and 'English (US)' buttons, along with the copyright notice: '© 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use'.

Type “ sansbound” Type bucket name and click Tick mark

Click Refresh to get effect with new bucket name



The screenshot shows the AWS CloudFormation Designer interface. On the left, the 'Resource types' sidebar lists various AWS services, with 'S3' expanded to show 'Bucket' and 'BucketPolicy'. The main canvas displays a grid with a red bucket icon labeled 'S3B50ANF Bucket'. A red text message 'Designer is out of date, hit refresh' is visible in the top right of the canvas. Below the canvas, the 'Properties' tab is active, showing the JSON template for the 'sansbound' resource. The template defines the resource type as 'AWS::S3::Bucket' with empty properties. The bottom of the interface includes a footer with 'Feedback', 'English (US)', and copyright information.

File: 'new.template'

Designer is out of date, hit refresh

S3B50ANF Bucket

Resource types

- OpsWorks
- RDS
- Redshift
- Route53
- S3
  - Bucket
  - BucketPolicy
- SDB
- SNS
- SQS
- SSM
- WAF
- WorkSpaces

Properties Metadata DeletionPolicy DependsOn Condition

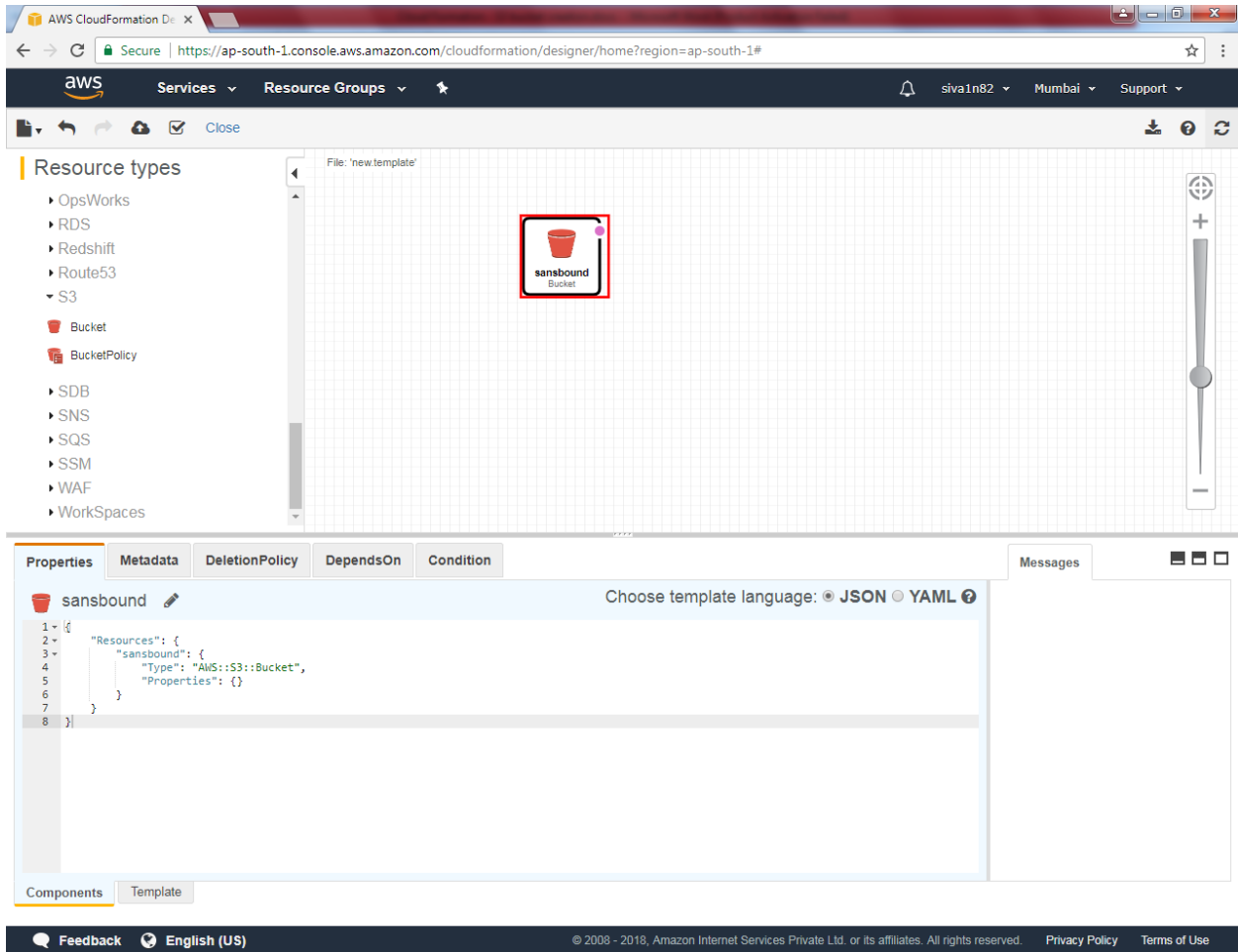
Choose template language: ☒ JSON ☐ YAML

```
1 {
2   "Resources": {
3     "sansbound": {
4       "Type": "AWS::S3::Bucket",
5       "Properties": {}
6     }
7   }
8 }
```

Components Template

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Now bucket name has renamed.

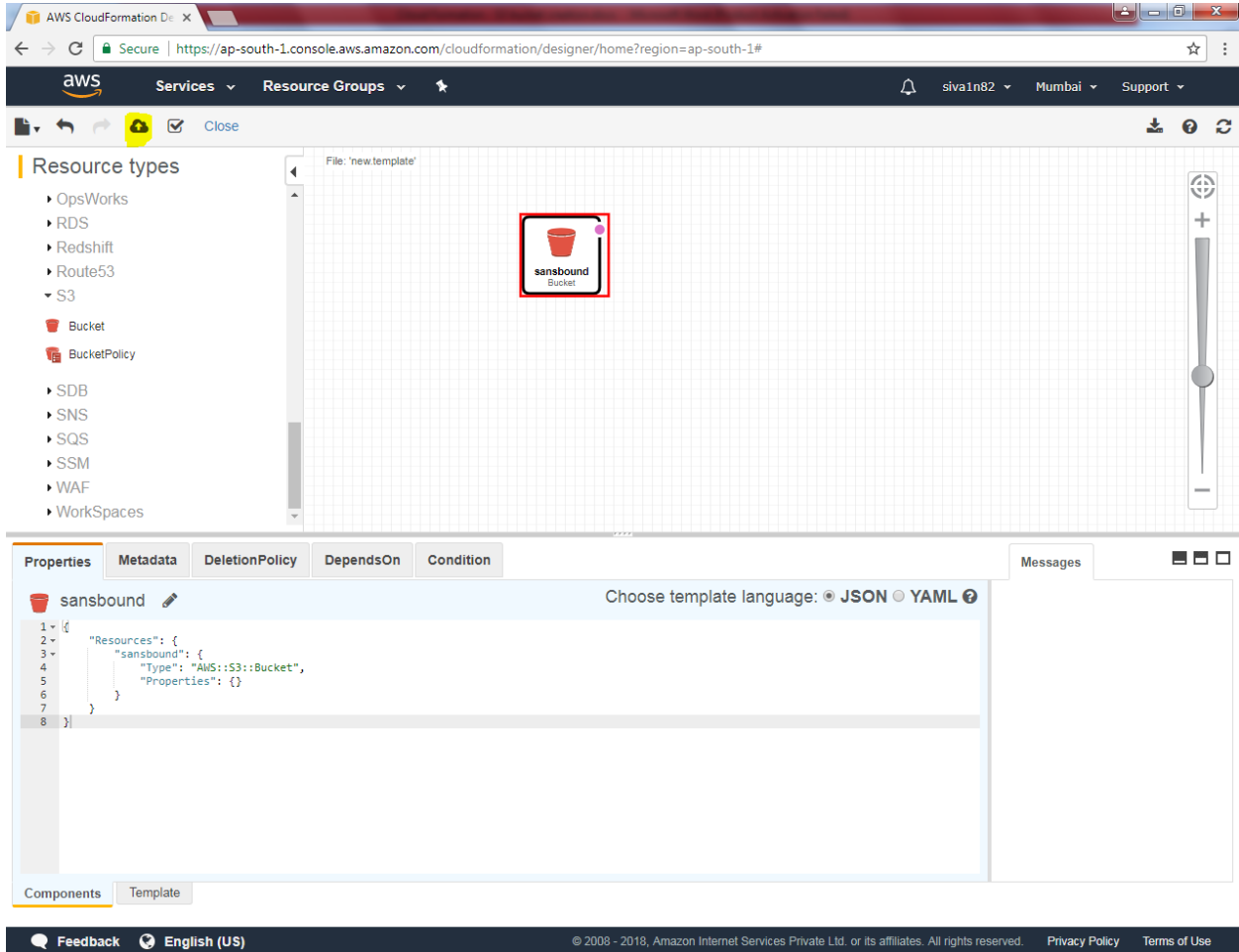


The screenshot displays the AWS CloudFormation Designer interface. On the left, the 'Resource types' sidebar lists various AWS services, with 'S3' expanded to show 'Bucket' and 'BucketPolicy'. The main canvas shows a grid with a red bucket icon labeled 'sansbound' and the text 'Bucket' below it. Below the canvas, the 'Properties' tab is active, showing the JSON template for the 'sansbound' resource. The template is as follows:

```
1 {  
2   "Resources": {  
3     "sansbound": {  
4       "Type": "AWS::S3::Bucket",  
5       "Properties": {}  
6     }  
7   }  
8 }
```

The interface also includes a top navigation bar with 'Services' and 'Resource Groups' dropdowns, a user profile 'siva1n82', and a location 'Mumbai'. The bottom footer contains 'Feedback', 'English (US)', and copyright information for Amazon Internet Services Private Ltd.

Click highlighted area (Create stack) to create the bucket.



The screenshot shows the AWS CloudFormation Designer interface. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and user information. The left sidebar lists 'Resource types' such as OpsWorks, RDS, Redshift, Route53, S3, Bucket, BucketPolicy, SDB, SNS, SQS, SSM, WAF, and WorkSpaces. The main canvas, titled 'File: new template', displays a grid with a red bucket icon labeled 'sansbound Bucket' highlighted by a red rectangle. Below the canvas, the 'Properties' tab is active, showing a JSON template snippet for the 'sansbound' resource. The template language is set to JSON. The bottom of the interface includes a 'Feedback' link, 'English (US)' language selection, and copyright information.

File: 'new template'

Resource types

- OpsWorks
- RDS
- Redshift
- Route53
- S3
- Bucket
- BucketPolicy
- SDB
- SNS
- SQS
- SSM
- WAF
- WorkSpaces

Properties Metadata DeletionPolicy DependsOn Condition

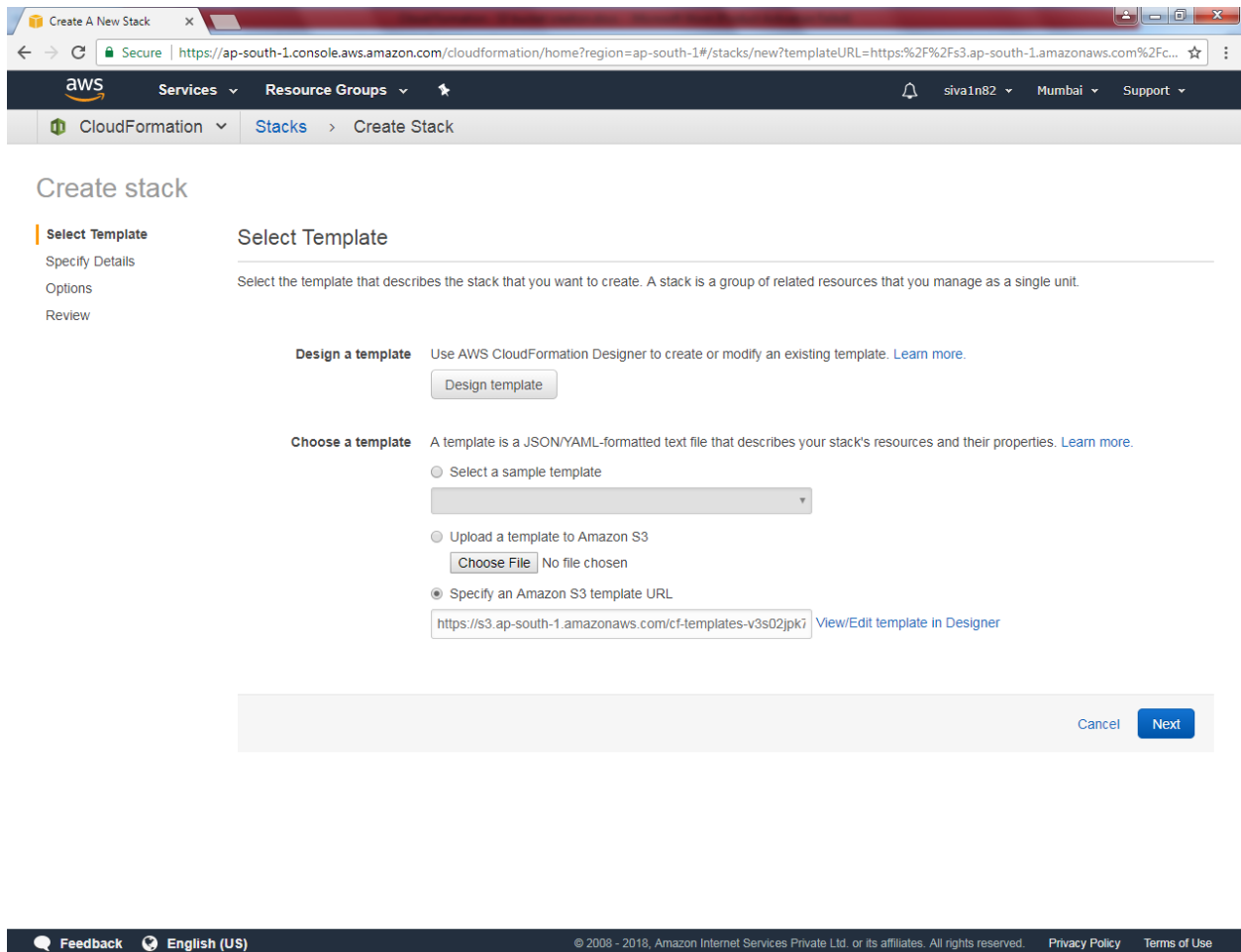
Choose template language: ☒ JSON ☐ YAML

```
1 {
2   "Resources": {
3     "sansbound": {
4       "Type": "AWS::S3::Bucket",
5       "Properties": {}
6     }
7   }
8 }
```

Components Template

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The screenshot shows the AWS CloudFormation 'Create Stack' page in a web browser. The browser's address bar shows the URL: `https://ap-south-1.console.aws.amazon.com/cloudformation/home?region=ap-south-1#/stacks/new?templateURL=https%3A%2F%2Fs3.ap-south-1.amazonaws.com%2F...`. The AWS navigation bar at the top includes the 'Services' menu, 'Resource Groups', and user information for 'siva1n82' in the 'Mumbai' region. The breadcrumb trail indicates the path: 'CloudFormation > Stacks > Create Stack'.

### Create stack

- Select Template** (Active)
- Specify Details
- Options
- Review

#### Select Template

Select the template that describes the stack that you want to create. A stack is a group of related resources that you manage as a single unit.

**Design a template** Use AWS CloudFormation Designer to create or modify an existing template. [Learn more.](#)

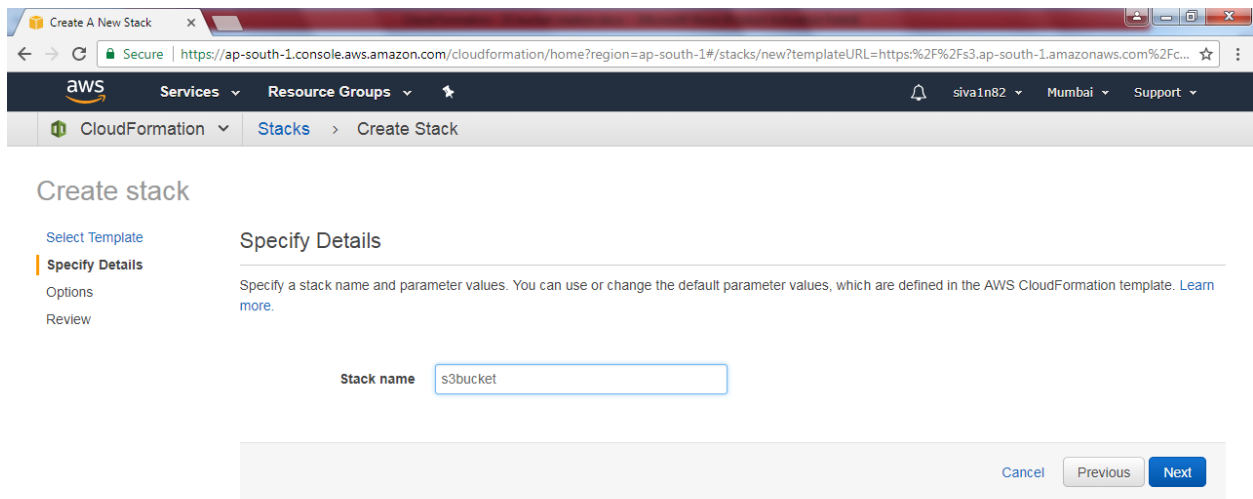
**Choose a template** A template is a JSON/YAML-formatted text file that describes your stack's resources and their properties. [Learn more.](#)

- ☐ Select a sample template
- ☐ Upload a template to Amazon S3  
 No file chosen
- ☒ Specify an Amazon S3 template URL  

`https://s3.ap-south-1.amazonaws.com/cf-templates-v3s02jpk7` [View/Edit template in Designer](#)

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Type stack name as “s3bucket”



Create A New Stack

Secure | https://ap-south-1.console.aws.amazon.com/cloudformation/home?region=ap-south-1#/stacks/new?templateURL=https%2F%2Fs3.ap-south-1.amazonaws.com%2F...

aws Services Resource Groups

CloudFormation Stacks > Create Stack

### Create stack

- Select Template
- Specify Details**
- Options
- Review

#### Specify Details

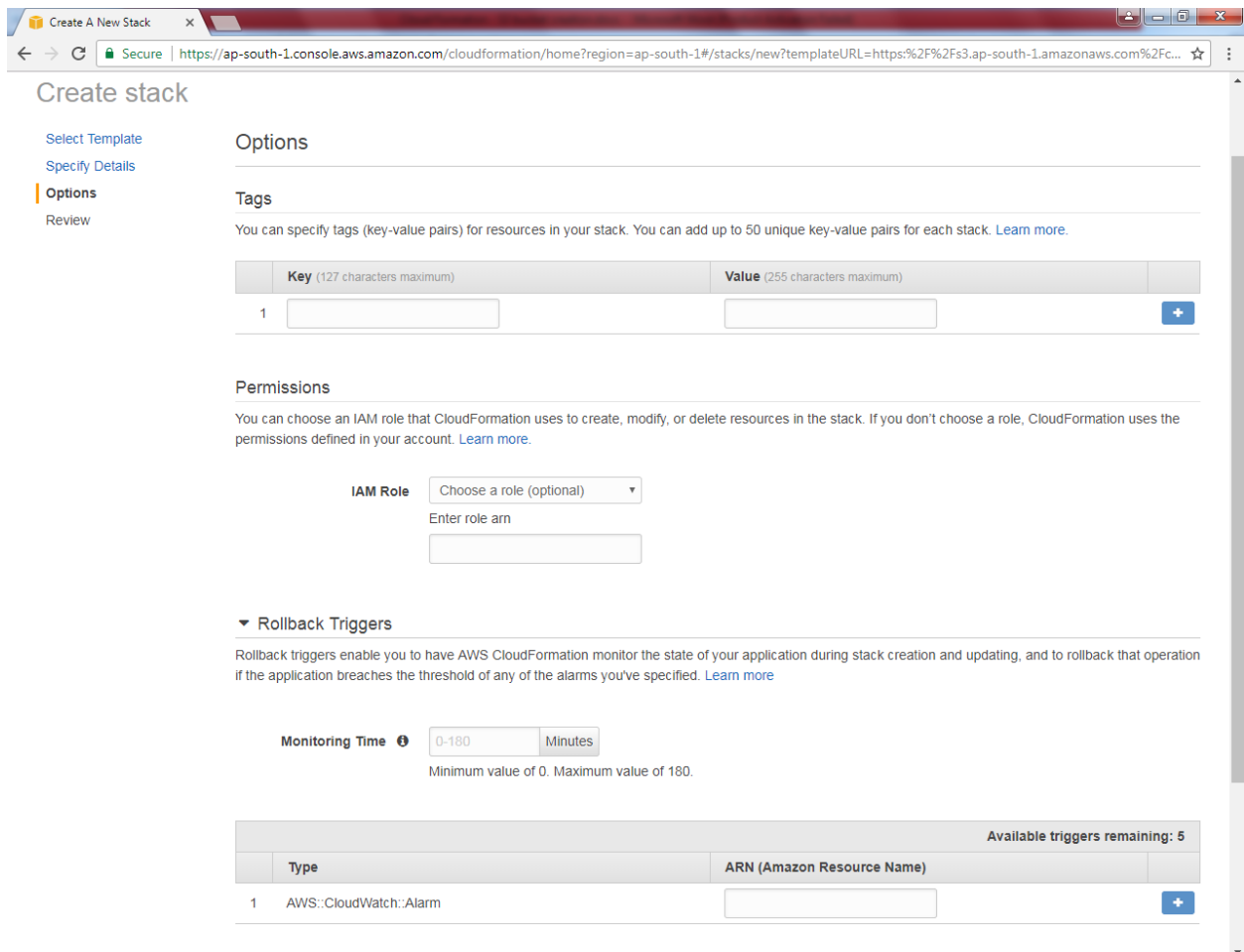
Specify a stack name and parameter values. You can use or change the default parameter values, which are defined in the AWS CloudFormation template. [Learn more.](#)

Stack name

Cancel Previous Next

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Leave default and click “Next”.



Create A New Stack

Secure | <https://ap-south-1.console.aws.amazon.com/cloudformation/home?region=ap-south-1#/stacks/new?templateURL=https%3A%2F%2Fs3.ap-south-1.amazonaws.com%2F...>

## Create stack

- Select Template
- Specify Details
- Options**
- Review

### Options

#### Tags

You can specify tags (key-value pairs) for resources in your stack. You can add up to 50 unique key-value pairs for each stack. [Learn more.](#)

	Key (127 characters maximum)	Value (255 characters maximum)	
1	<input type="text"/>	<input type="text"/>	<a href="#">+</a>

#### Permissions

You can choose an IAM role that CloudFormation uses to create, modify, or delete resources in the stack. If you don't choose a role, CloudFormation uses the permissions defined in your account. [Learn more.](#)

**IAM Role**

Enter role arn

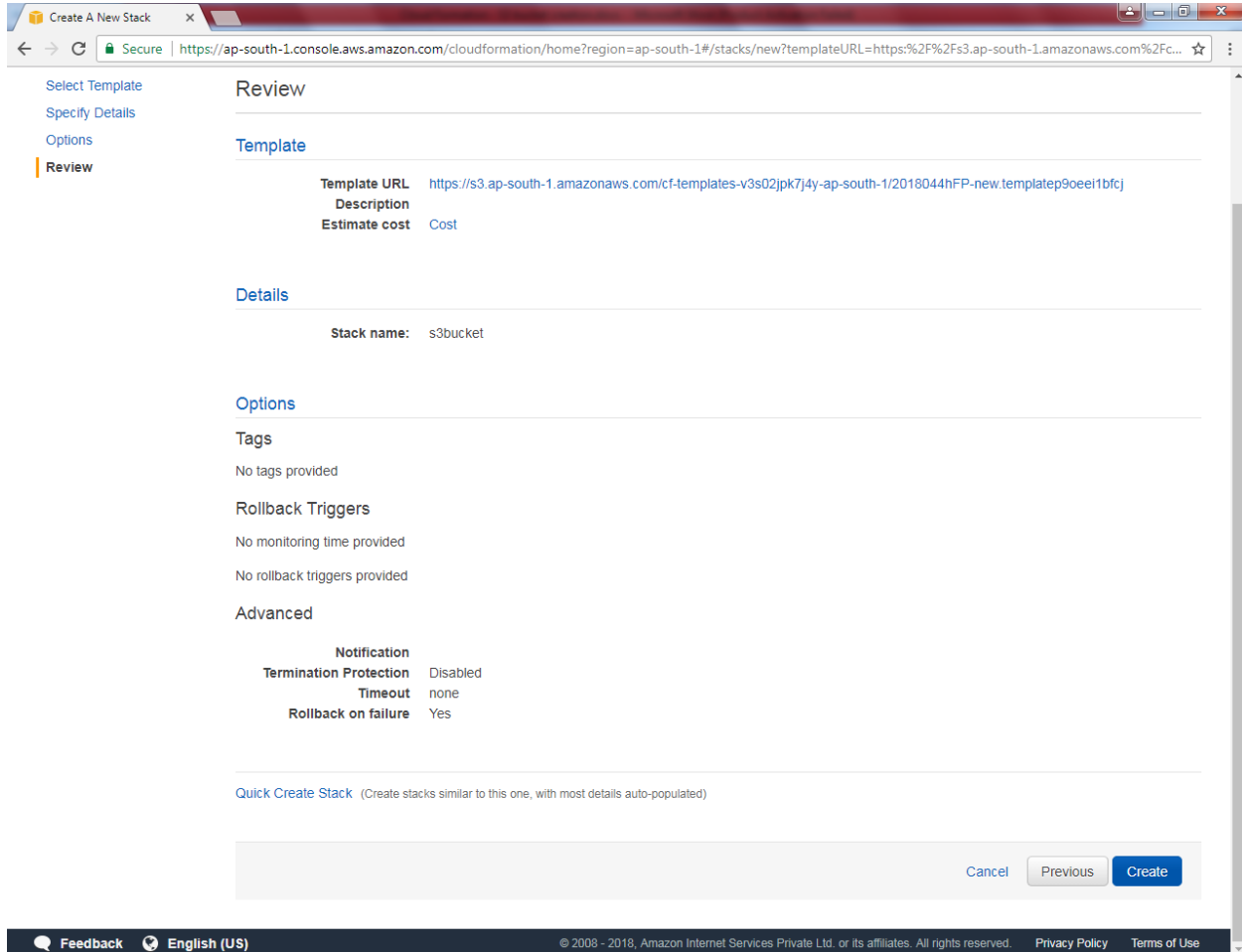
#### ▼ Rollback Triggers

Rollback triggers enable you to have AWS CloudFormation monitor the state of your application during stack creation and updating, and to rollback that operation if the application breaches the threshold of any of the alarms you've specified. [Learn more](#)

**Monitoring Time**    
Minimum value of 0. Maximum value of 180.

		Available triggers remaining: 5
	Type	ARN (Amazon Resource Name)
1	AWS::CloudWatch::Alarm	<input type="text"/>

Click “Create”.



Create A New Stack

Secure | <https://ap-south-1.console.aws.amazon.com/cloudformation/home?region=ap-south-1#/stacks/new?templateURL=https%3A%2F%2Fs3.ap-south-1.amazonaws.com%2F...>

Select Template  
Specify Details  
Options  
Review

### Review

#### Template

Template URL	<a href="https://s3.ap-south-1.amazonaws.com/cf-templates-v3s02pk7j4y-ap-south-1/2018044hFP-new.template9oeel1bfcj">https://s3.ap-south-1.amazonaws.com/cf-templates-v3s02pk7j4y-ap-south-1/2018044hFP-new.template9oeel1bfcj</a>
Description	
Estimate cost	Cost

#### Details

Stack name: s3bucket

#### Options

##### Tags

No tags provided

##### Rollback Triggers

No monitoring time provided  
No rollback triggers provided

##### Advanced

Notification	
Termination Protection	Disabled
Timeout	none
Rollback on failure	Yes

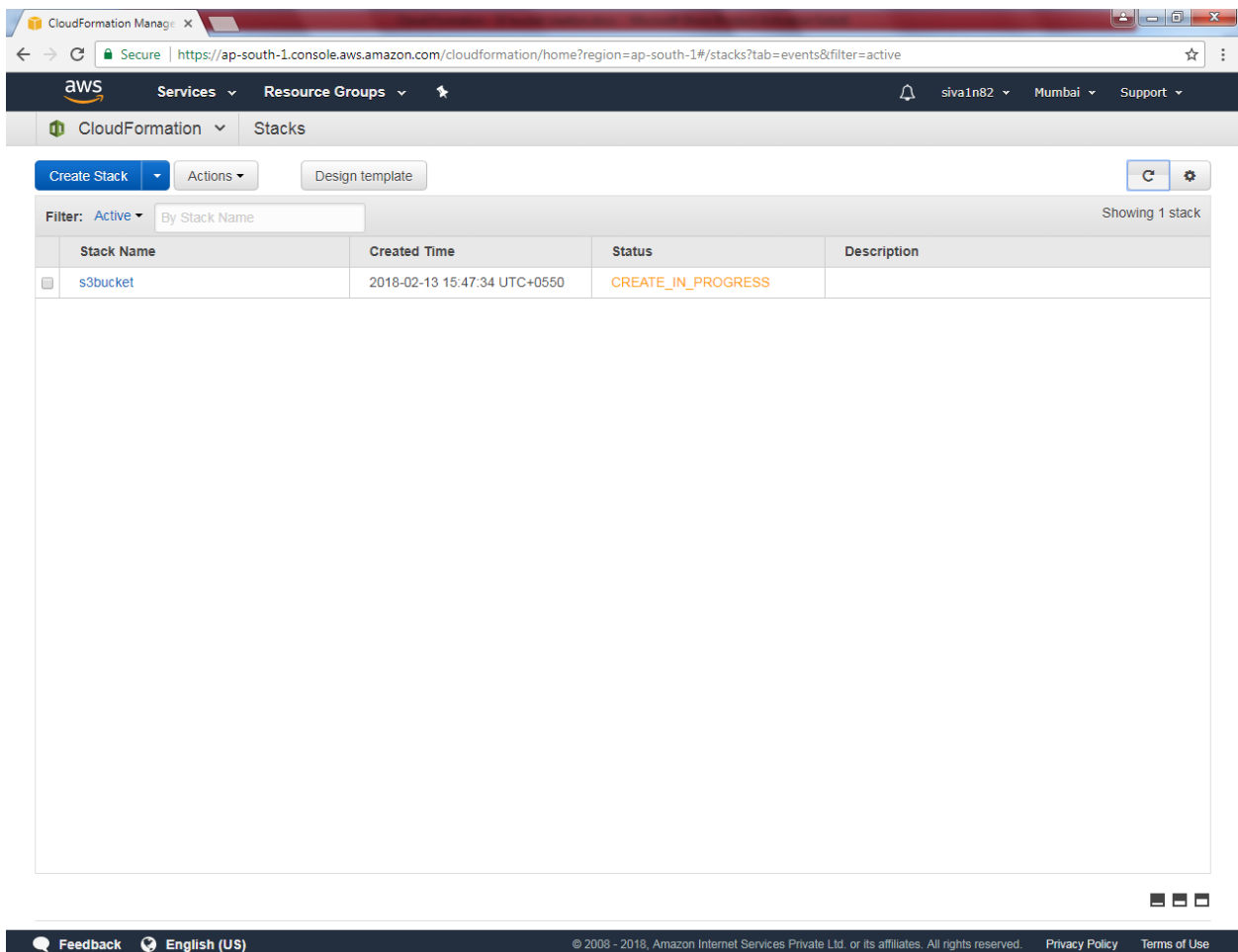
[Quick Create Stack](#) (Create stacks similar to this one, with most details auto-populated)

Cancel Previous **Create**

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Press “F5”.

Again press “F5”.

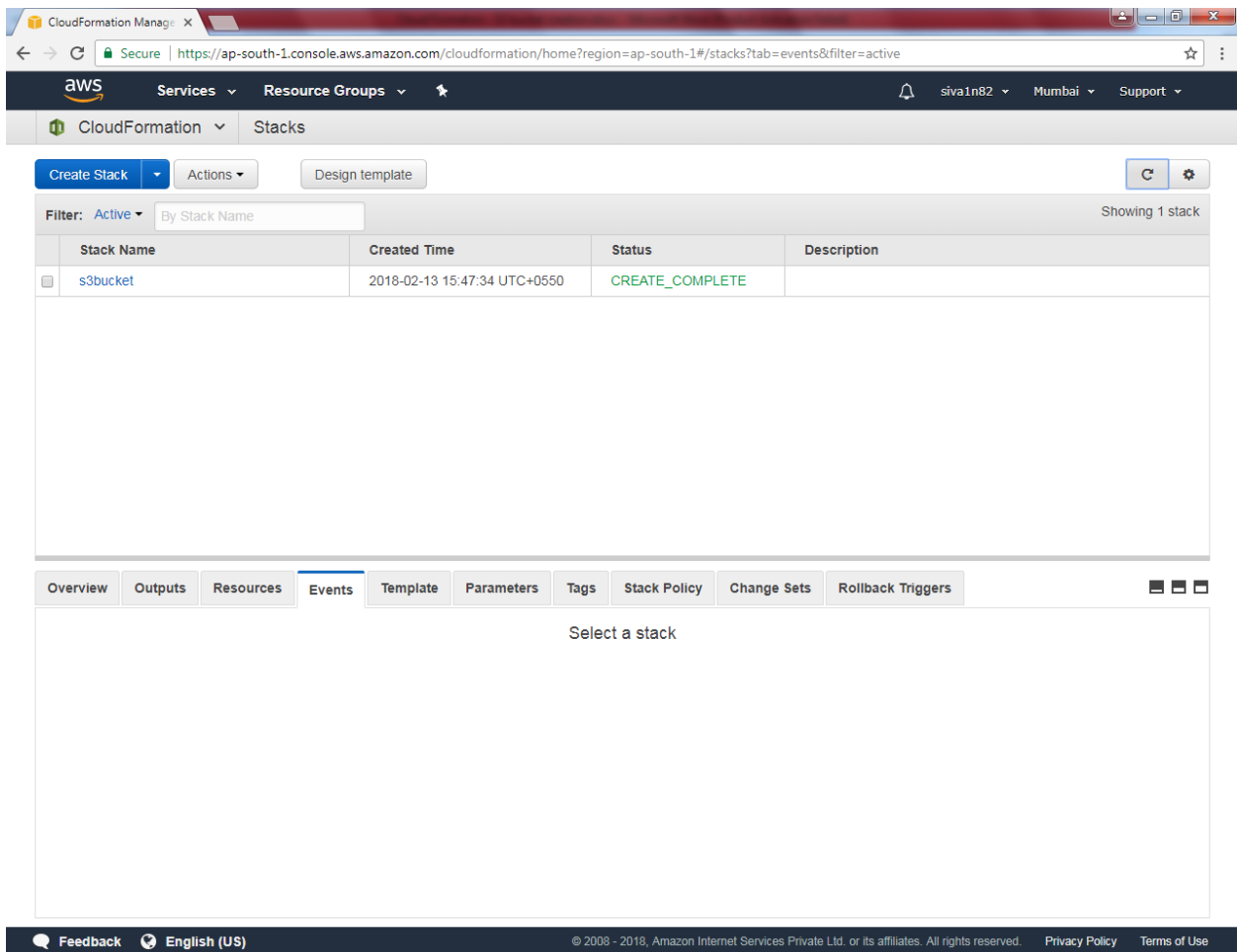


The screenshot shows the AWS CloudFormation console in the 'Stacks' tab. The browser address bar indicates the URL: <https://ap-south-1.console.aws.amazon.com/cloudformation/home?region=ap-south-1#/stacks?tab=events&filter=active>. The console header shows the AWS logo, navigation links for Services, Resource Groups, and a user profile 'siva1n82' in the 'Mumbai' region. Below the header, the 'CloudFormation' section is active, showing 'Stacks'. There are buttons for 'Create Stack', 'Actions', and 'Design template'. A filter dropdown is set to 'Active', and a search box contains 'By Stack Name'. The text 'Showing 1 stack' is displayed. A table lists the stack:

	Stack Name	Created Time	Status	Description
<input type="checkbox"/>	s3bucket	2018-02-13 15:47:34 UTC+0550	CREATE_IN_PROGRESS	

At the bottom of the console, there is a footer with 'Feedback', 'English (US)', and copyright information: '© 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use'.

Now S3 bucket has been successfully created.

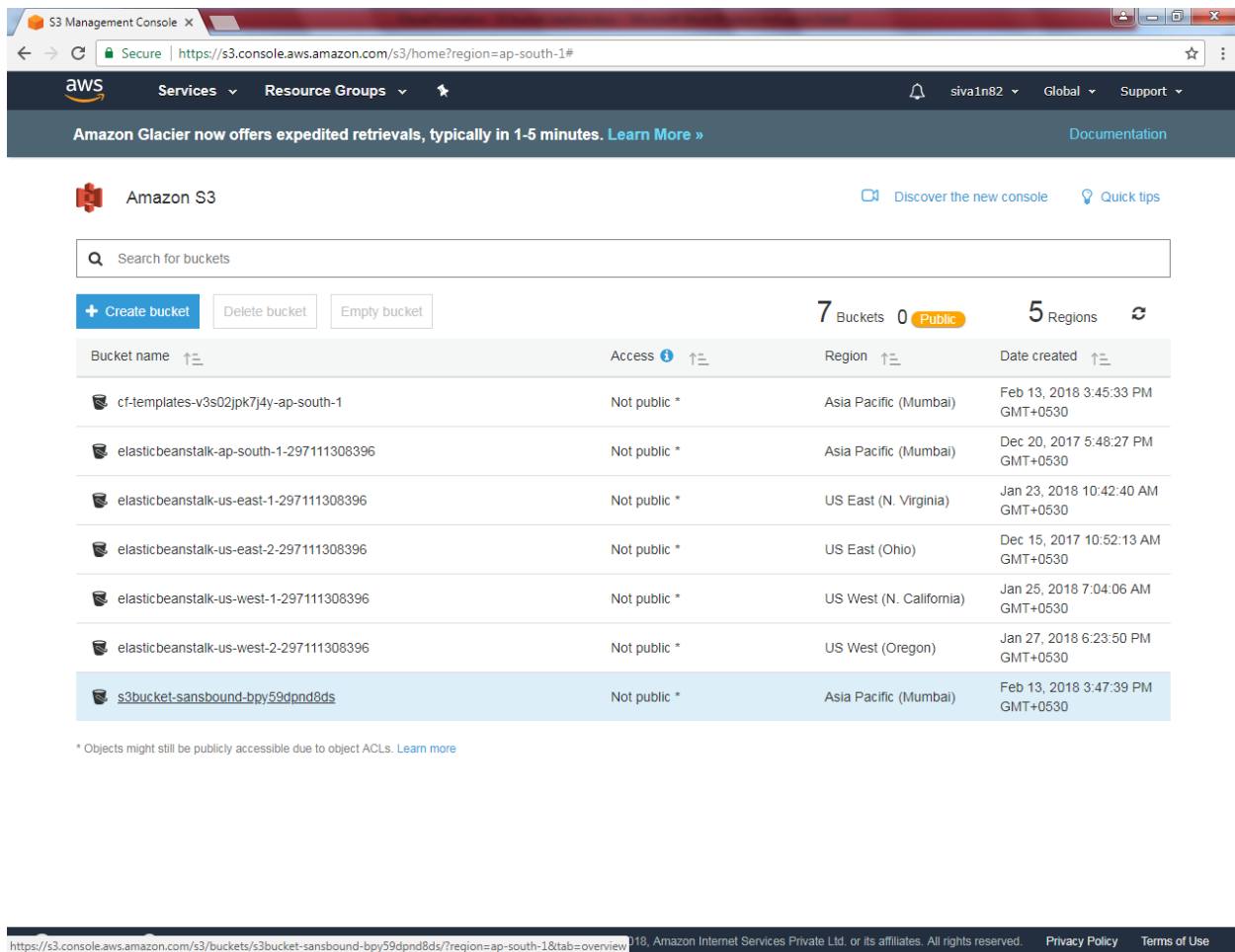


The screenshot shows the AWS CloudFormation console interface. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and user information 'siva1n82' in 'Mumbai'. The 'CloudFormation' service is selected, and the 'Stacks' view is active. Below the navigation bar, there are buttons for 'Create Stack', 'Actions', and 'Design template'. A filter dropdown is set to 'Active', and a search box contains 'By Stack Name'. The text 'Showing 1 stack' is displayed. A table lists the stack:

	Stack Name	Created Time	Status	Description
<input type="checkbox"/>	s3bucket	2018-02-13 15:47:34 UTC+0550	CREATE_COMPLETE	

Below the table, there are tabs for 'Overview', 'Outputs', 'Resources', 'Events', 'Template', 'Parameters', 'Tags', 'Stack Policy', 'Change Sets', and 'Rollback Triggers'. The 'Events' tab is currently selected, showing a message 'Select a stack'. The footer contains 'Feedback', 'English (US)', and copyright information: '© 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use'.

Go to S3, you can able to view the folder in the name of sansbound.



The screenshot shows the AWS S3 Management Console interface. At the top, there's a navigation bar with the AWS logo, 'Services', 'Resource Groups', and user information. Below this is a banner for Amazon Glacier. The main section is titled 'Amazon S3' and includes a search bar and buttons for 'Create bucket', 'Delete bucket', and 'Empty bucket'. A summary shows 7 Buckets, 0 Public, and 5 Regions. A table lists the buckets with columns for Bucket name, Access, Region, and Date created. The bucket 's3bucket-sansbound-bpy59dpnd8ds' is highlighted in blue. A footer note states: '\* Objects might still be publicly accessible due to object ACLs. [Learn more](#)'.

Bucket name	Access	Region	Date created
cf-templates-v3s02jpk7j4y-ap-south-1	Not public *	Asia Pacific (Mumbai)	Feb 13, 2018 3:45:33 PM GMT+0530
elasticbeanstalk-ap-south-1-297111308396	Not public *	Asia Pacific (Mumbai)	Dec 20, 2017 5:48:27 PM GMT+0530
elasticbeanstalk-us-east-1-297111308396	Not public *	US East (N. Virginia)	Jan 23, 2018 10:42:40 AM GMT+0530
elasticbeanstalk-us-east-2-297111308396	Not public *	US East (Ohio)	Dec 15, 2017 10:52:13 AM GMT+0530
elasticbeanstalk-us-west-1-297111308396	Not public *	US West (N. California)	Jan 25, 2018 7:04:06 AM GMT+0530
elasticbeanstalk-us-west-2-297111308396	Not public *	US West (Oregon)	Jan 27, 2018 6:23:50 PM GMT+0530
<b>s3bucket-sansbound-bpy59dpnd8ds</b>	Not public *	Asia Pacific (Mumbai)	Feb 13, 2018 3:47:39 PM GMT+0530

\* Objects might still be publicly accessible due to object ACLs. [Learn more](#)