1. Create IAM User on AWS

Refer to the link below on how to create an IAM user.
Link: https://docs.aws.amazon.com/IAM/latest/UserGuide/id_users_create.html

Once the user is created download the ppk/pem file to your local machine and keep it at a secure location as we will need to connect to the ec2 Instance.

2. Install AWS CLI

1.1 Installing AWS CLI on Windows

The link describes how to install, update, and remove the AWS CLI version 2 on Windows. Installing, updating, and uninstalling the AWS CLI version 2 on Windows - AWS Command Line Interface (amazon.com)

1.2 Installing AWS CLI on Mac

The link describes how to install, update, and remove the AWS CLI version 2 on macOS. Installing, Installing, updating, and uninstalling the AWS CLI version 2 on macOS - AWS Command Line Interface (amazon.com)

3. Create an empty S3 Bucket

Refer to the below link on how to create a S3 bucket.
Link: Step 1: Create your first S3 bucket - Amazon Simple Storage Service

4. Upload Files to S3 Bucket

3.1 Upload files to S3 Manually

Refer to the below link on how to upload Objects to S3 Bucket.
Link: Step 2: Upload an object to your bucket - Amazon Simple Storage Service

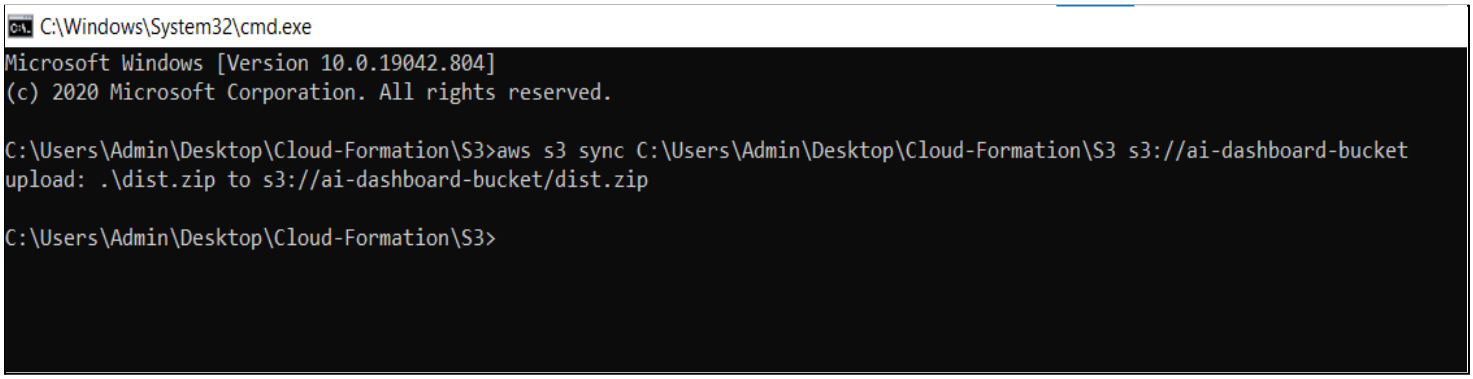
3.2 Upload files to S3 Using AWS CLI

a. Download the dist.zip folder from the Google Drive (https://drive.google.com/file/d/1YdgNtYsyRGe7FzwZndgUwb-Blx0pBlc5/view?usp=sharing) to your local machine.

b. Open CMD at the same location where you downloaded the dist.zip folder and execute the following command to upload the dist folder to S3 bucket.

```
Syntax: aws s3 sync <source-path> <destination-path>
Example: aws s3 sync C:\Users\Admin\Desktop\Cloud-Formation\S3
s3://ai-dashboard-bucket
```

c. Once you execute the command the file will get uploaded to s3 and you should see an output in cmd similar to the below screenshot.

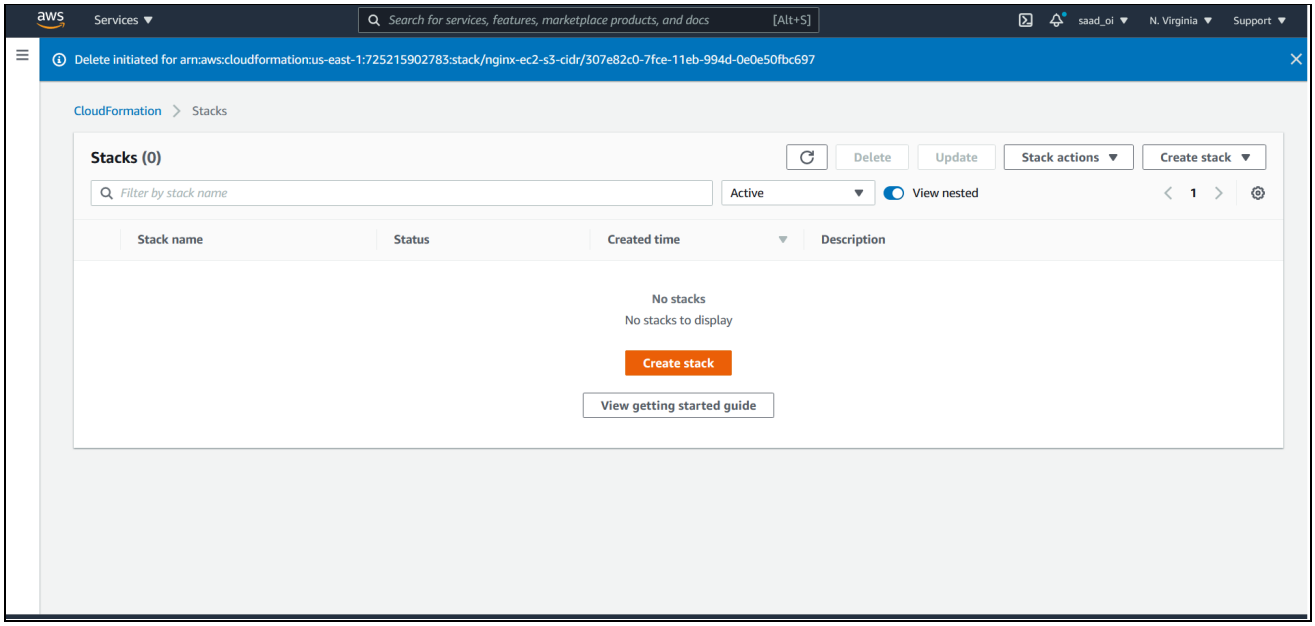


5. Execute Cloudformation script.

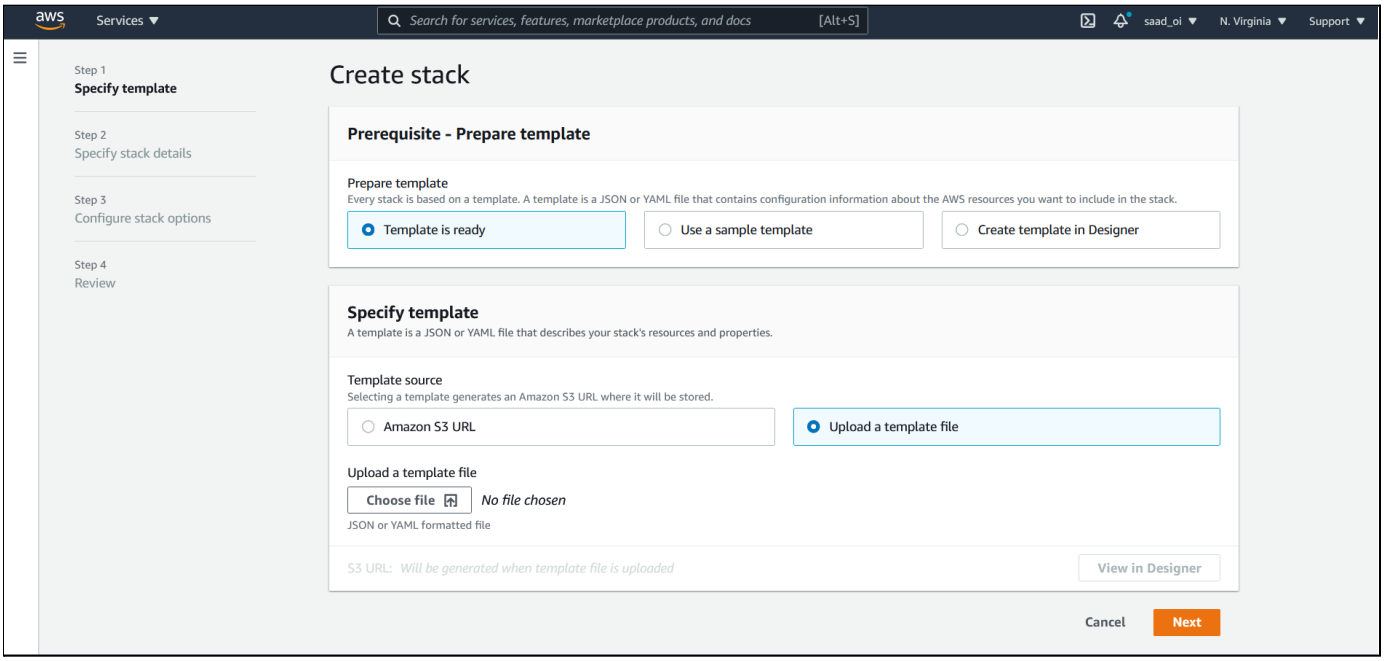
Once the files are uploaded to S3 bucket we can run the cloudformation script.

4.1 Executing the Cloudformation script using AWS Console.

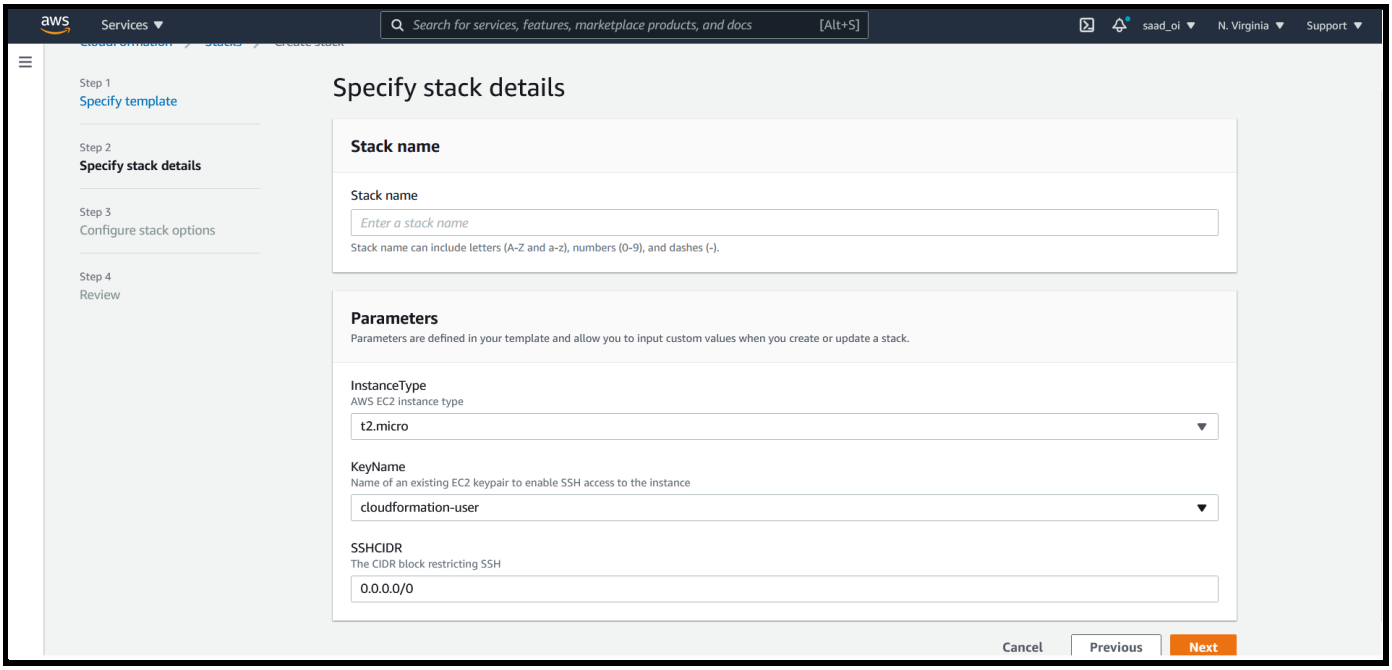
1. Login to AWS Console and navigate to Cloudformation Page. (https://console.aws.amazon.com/cloudformation/home)



2. Click on Create Stack and follow through the Wizard.

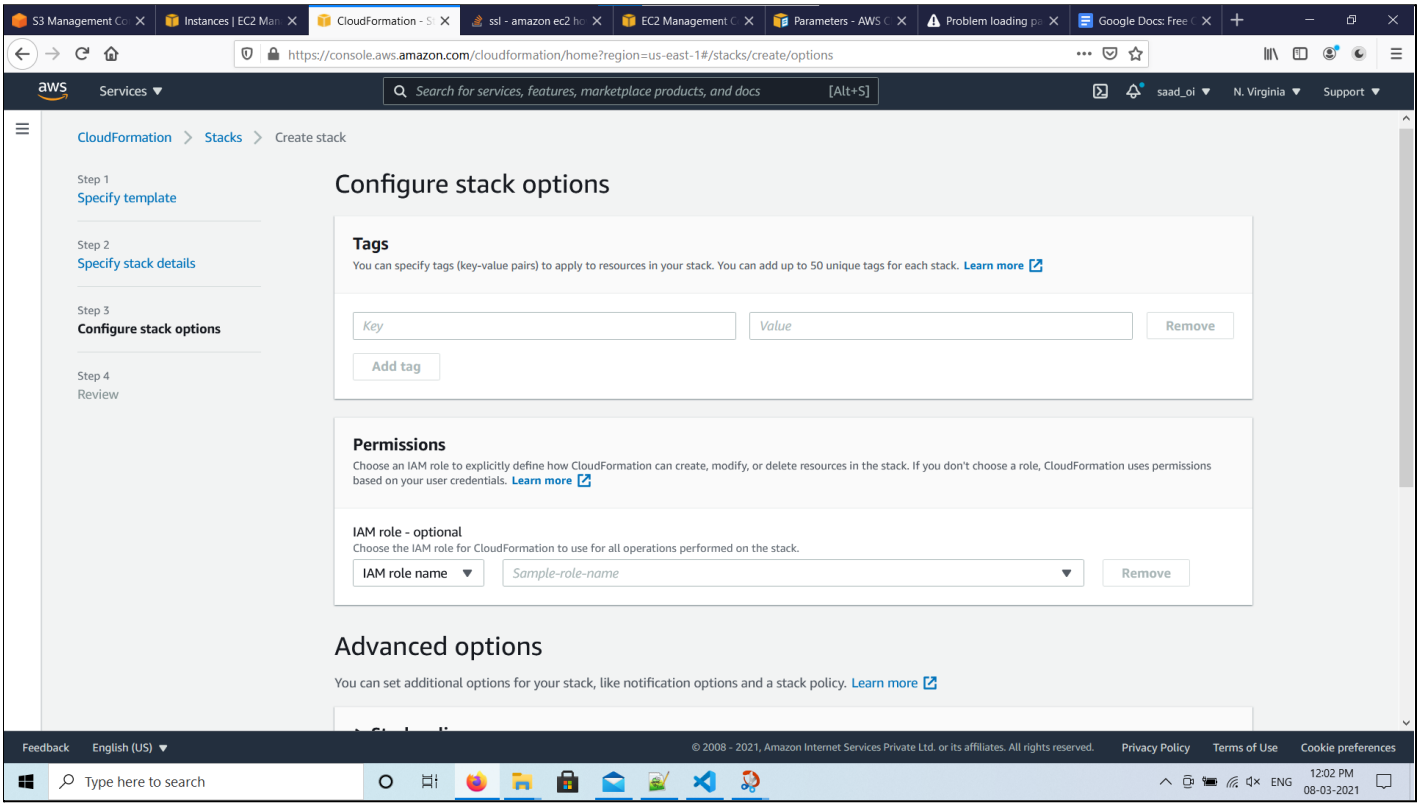


3. Click on "**Template is Ready**" and then click on "**Upload a template file**" and finally click on "**Choose file**" to locate the path of the file where it is located before clicking on the **Next button**.
4. By default the wizard will read the default properties and parameters from the script and fill the details for you, however you can change the properties from the dropdown. The only detail you need to provide is the Stack Name.



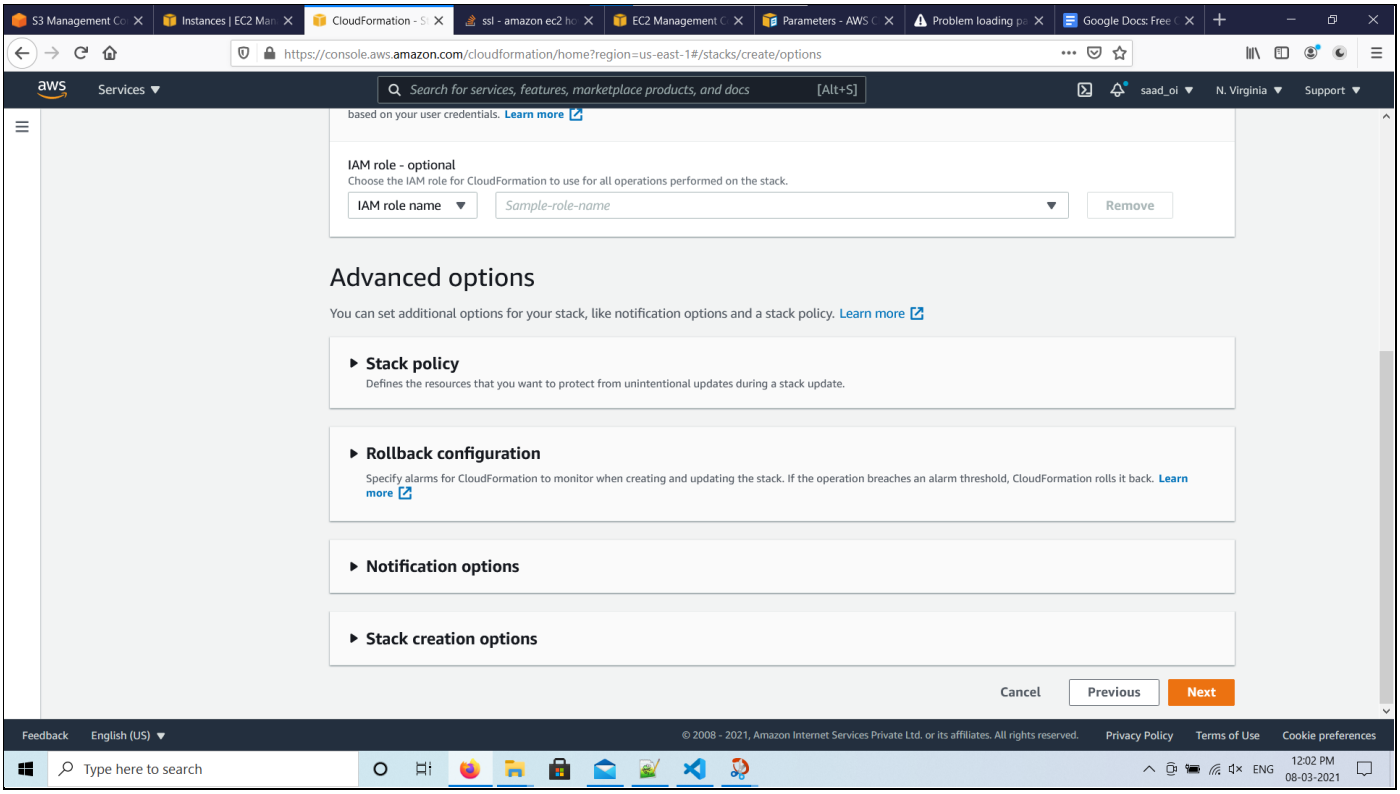
Go through the details and parameters once and if everything seems alright then Click on Next Button.

5. Next you will be taken to the Configure Stack Options screen.

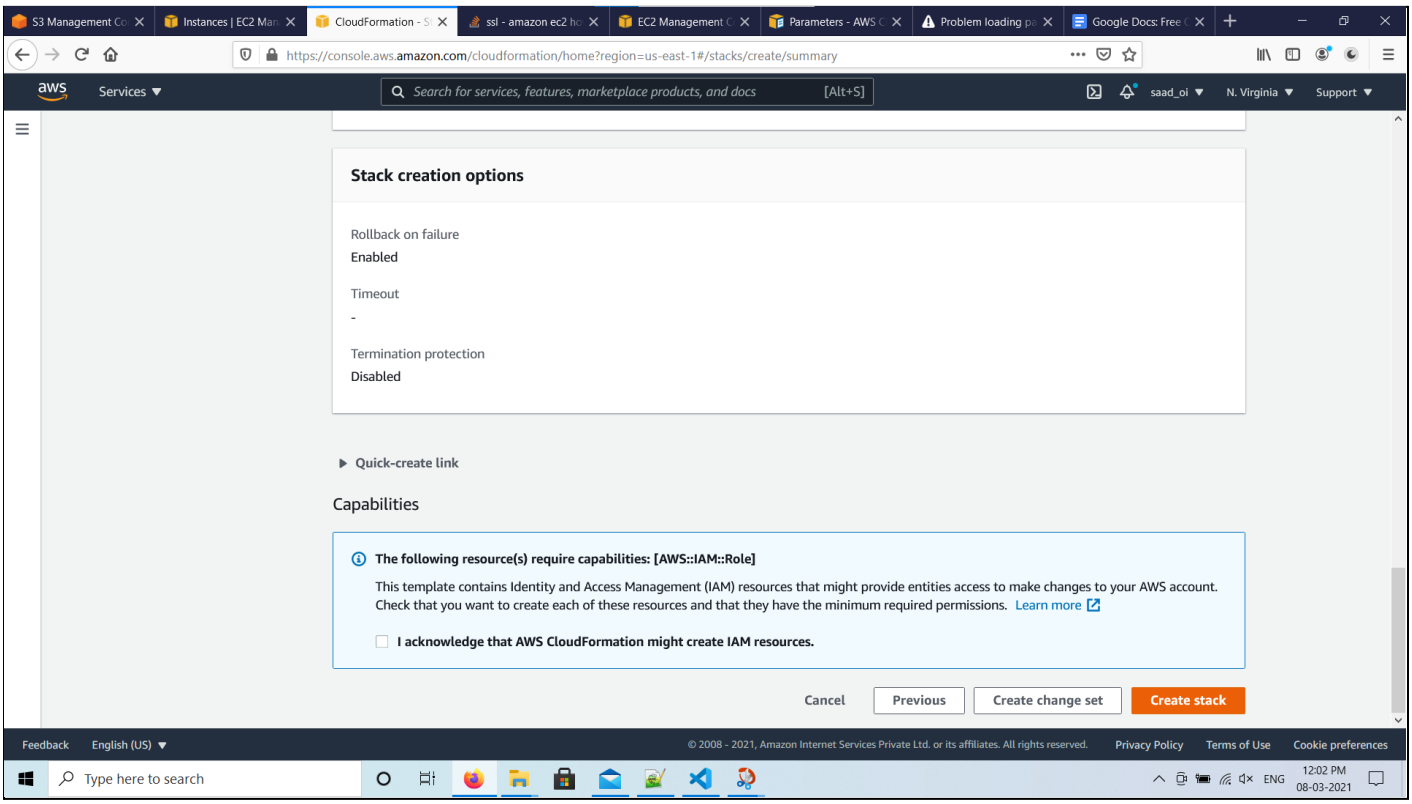


Fill out the details such as Tags and IAM role name. You can leave it blank as well.

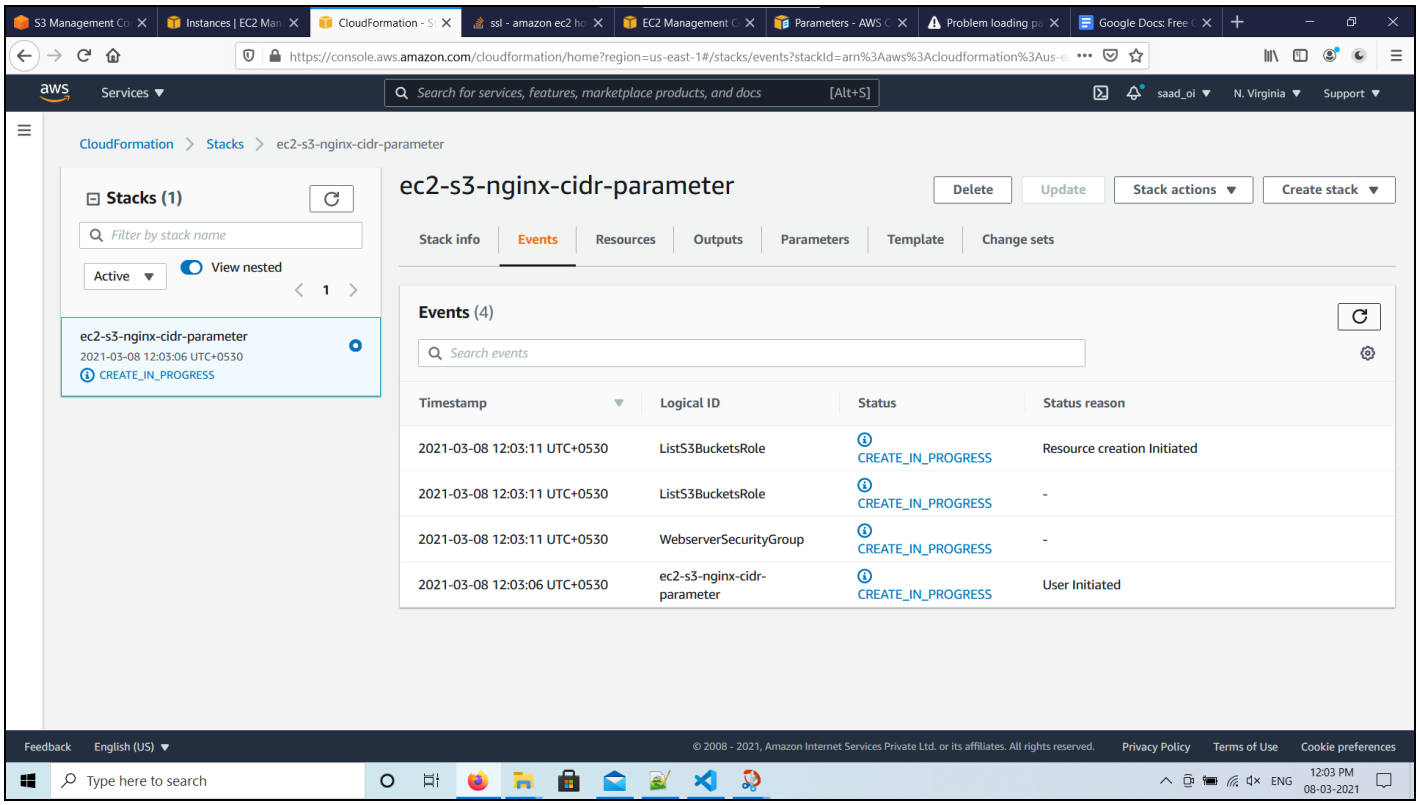
6. Scroll down to the bottom of the page and Click on Next.



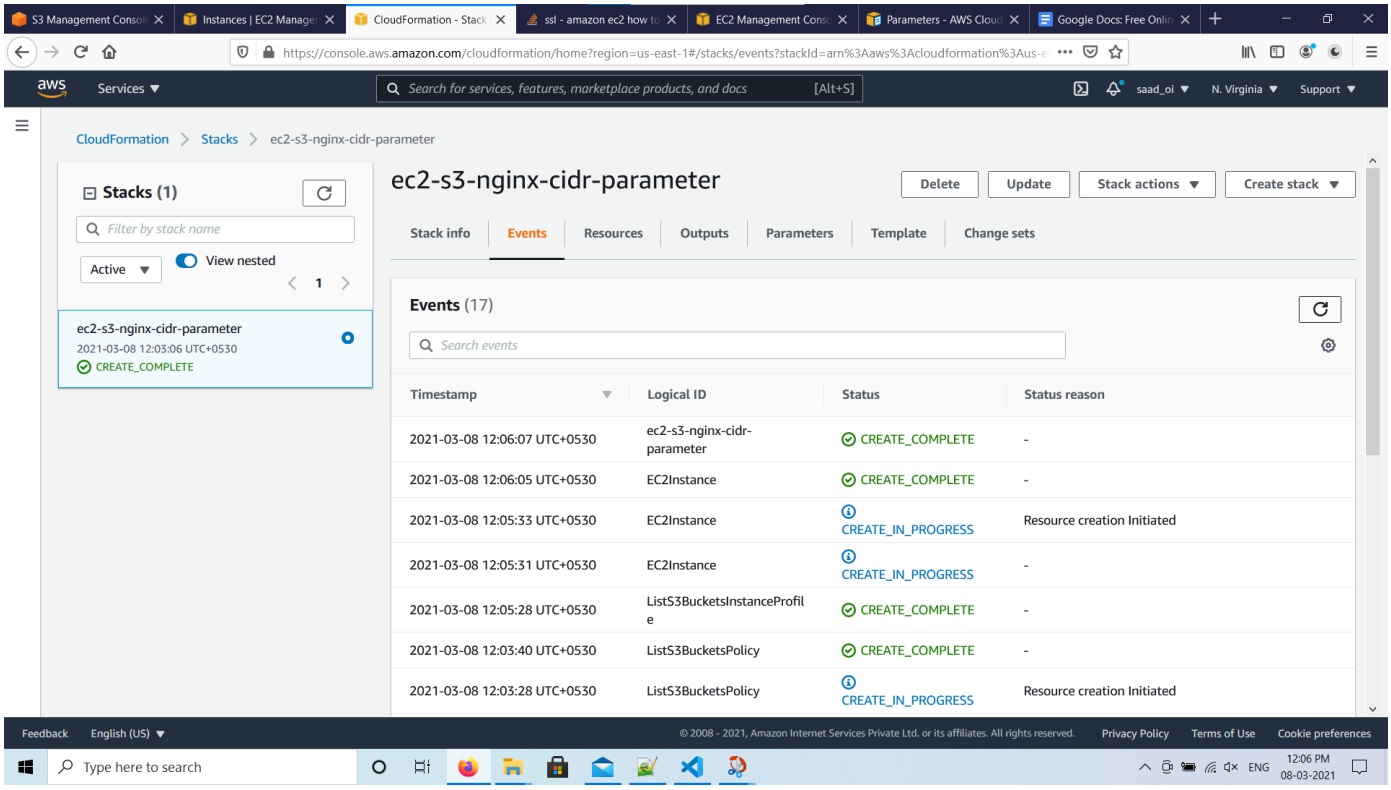
7. Once you click on the Next button you will be taken to the final step before the deployment and you will need to accept the acknowledgement. Once you have checked the Acknowledgment click on the **Create Stack** button.



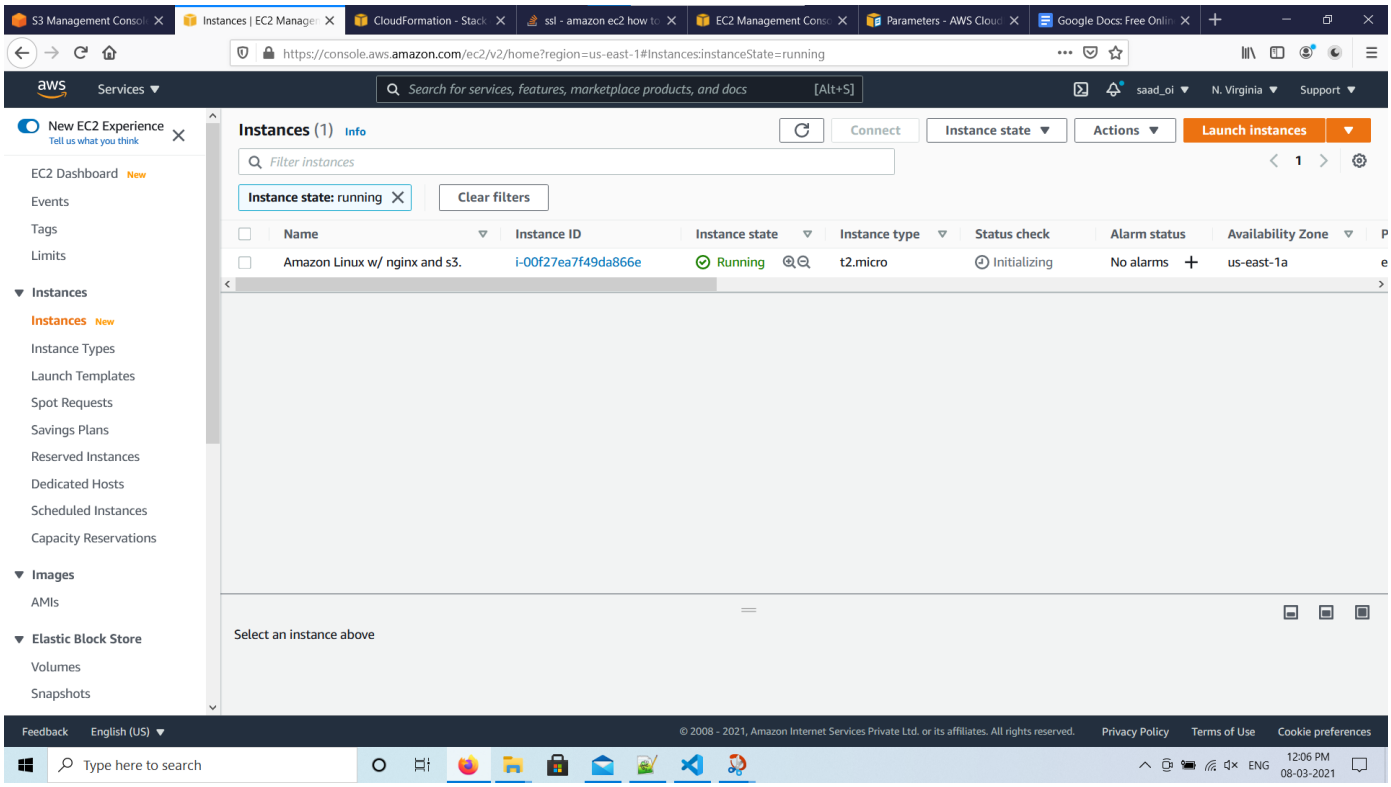
8. Sit back while the AWS deploys the stack. It might take a while(3-5 mins). You should be able to see the logs and progress as each stack is being executed and deployed.



9. Once the stack is deployed successfully you will get a message "**CREATE_COMPLETE**" and the screen should look something similar to the below screenshot.



10. Now you can go to the EC2 Dashboard and launch your instance.



4.2 Executing the Cloudformation script using the AWS CLI.

1. Download the cloudformation script and the parameters.json file.
2. Navigate to the folder where the script is located and open cmd.
3. Execute the below command from cmd

```
aws cloudformation create-stack --template-body
file://nginx-ec2-s3-cidr-parameter.template.yaml --stack-name nginx-aws-s3-CIDR
--parameters file://parameters.json --capabilities CAPABILITY_IAM
```

Once you successfully execute the command from CMD you should see the below output:

Output:

```
{
"StackId":"arn:aws:cloudformation:us-east-1:725215902783:stack/nginx-aws-s3-CIDR/9666e3
30-7fdc-11eb-977f-0e65b6fb18f9"
}
```

```
C:\Users\Admin\Desktop\Cloud-Formation\Drive-Template>aws cloudformation create-stack --template-body file://nginx-ec2-s3-cidr-parameter.template.yaml --stack-name nginx-aws-s3-CIDR --parameters ParameterKey=Key
Name,ParameterValue=cloudformation-user ParameterKey=InstanceType,ParameterValue=t2.micro --capabilities CAPABILITY_IAM
{
    "StackId": "arn:aws:cloudformation:us-east-1:725215902783:stack/nginx-aws-s3-CIDR/9666e330-7fdc-11eb-977f-0e65b6fb18f9"
}


C:\Users\Admin\Desktop\Cloud-Formation\Drive-Template>
```

4. You can check the Cloudformation screen to see the status of stack execution.
5. Once the stack is successfully created you can switch to EC2 Instance and login to your machine.

Note: By default the HTTPS(Port 443) is blocked for EC2 Instances so you will need to open the port.

Refer to this document on how to enable port 443 for ec2 instance

[Step 4: Enable HTTPS Traffic and Verify the Certificate - AWS CloudHSM]