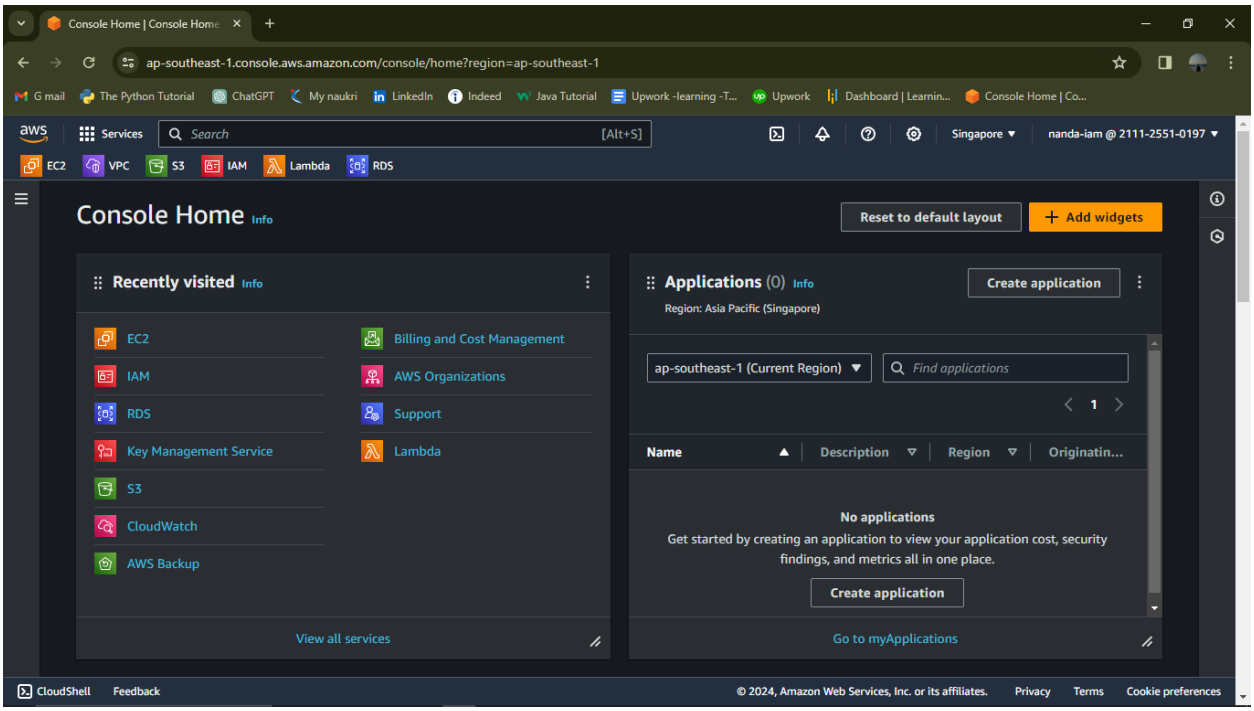
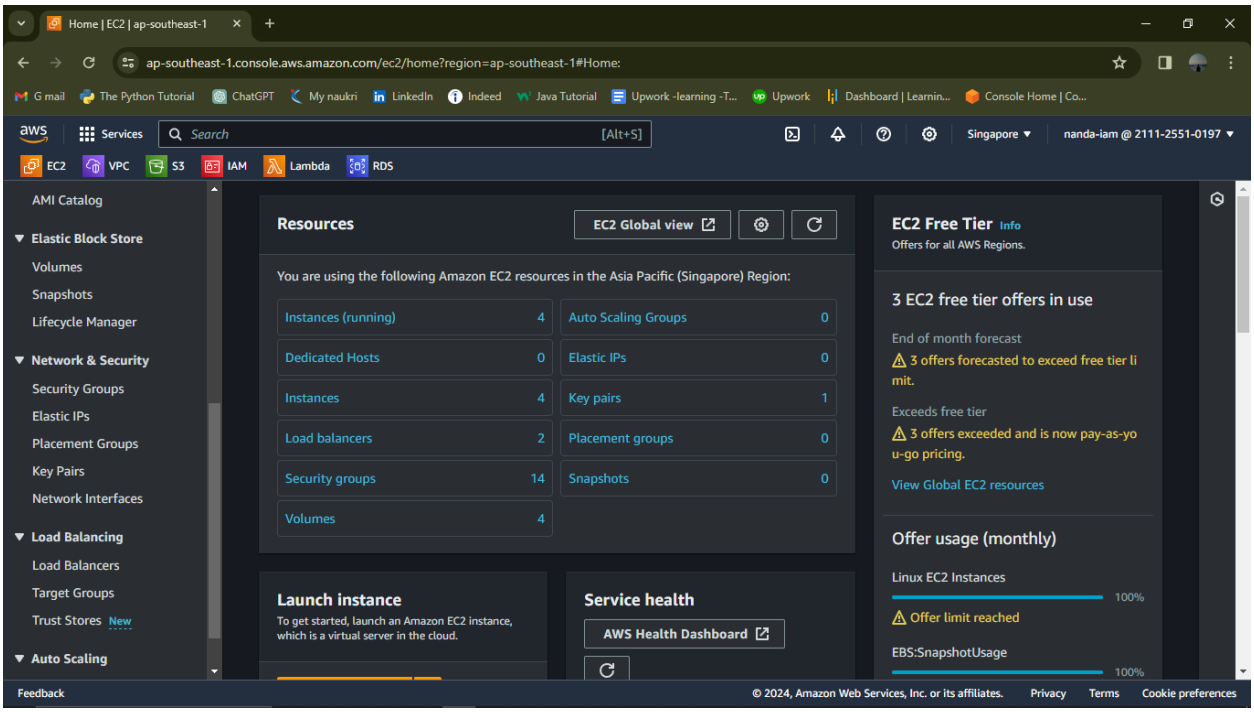
How can I connect AWS S3 bucket from an Amazon EC2 Instance?

Step 1: Log in to AWS Management Console and Open EC2

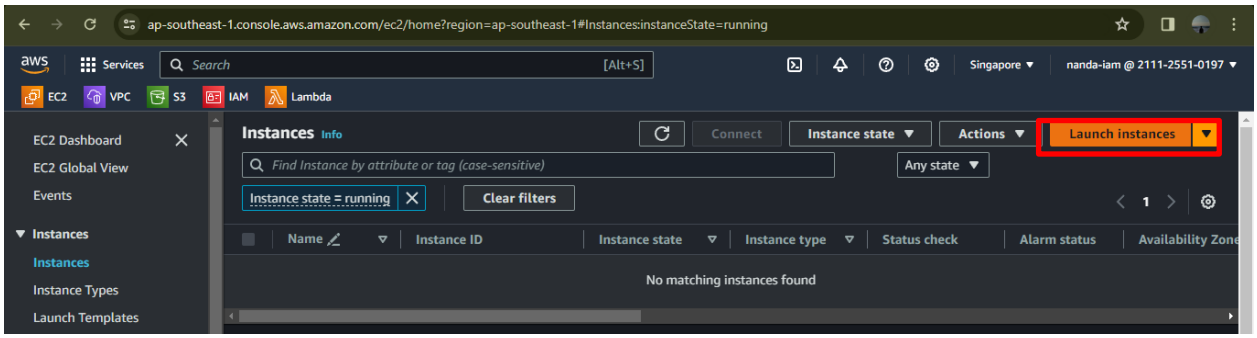


This will lead you to the EC2 dashboard like below.

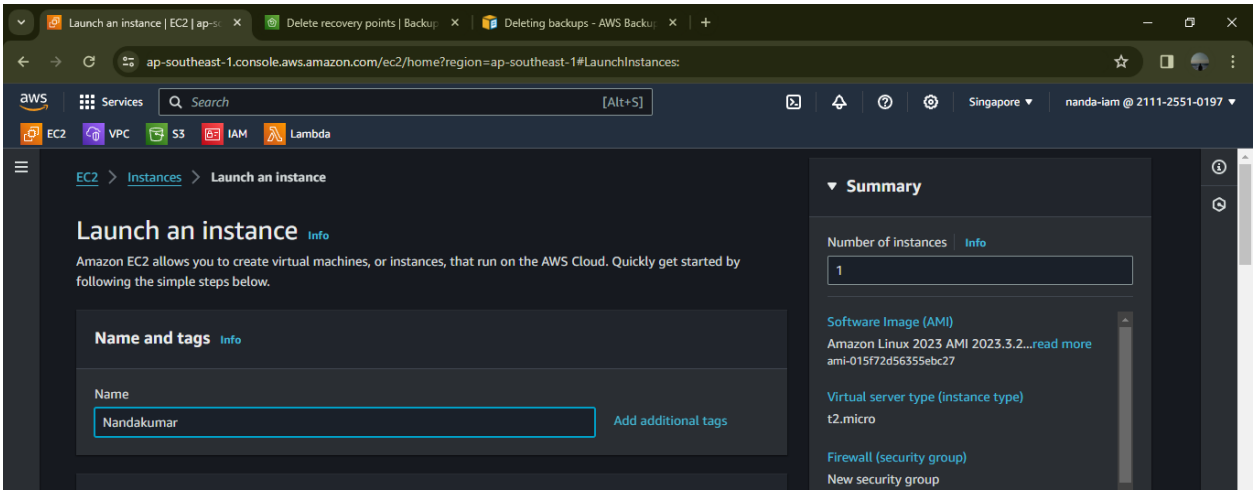
Click on Instance (running)



Step 2: To Create EC2 Instance in AWS, Click Launch Instance



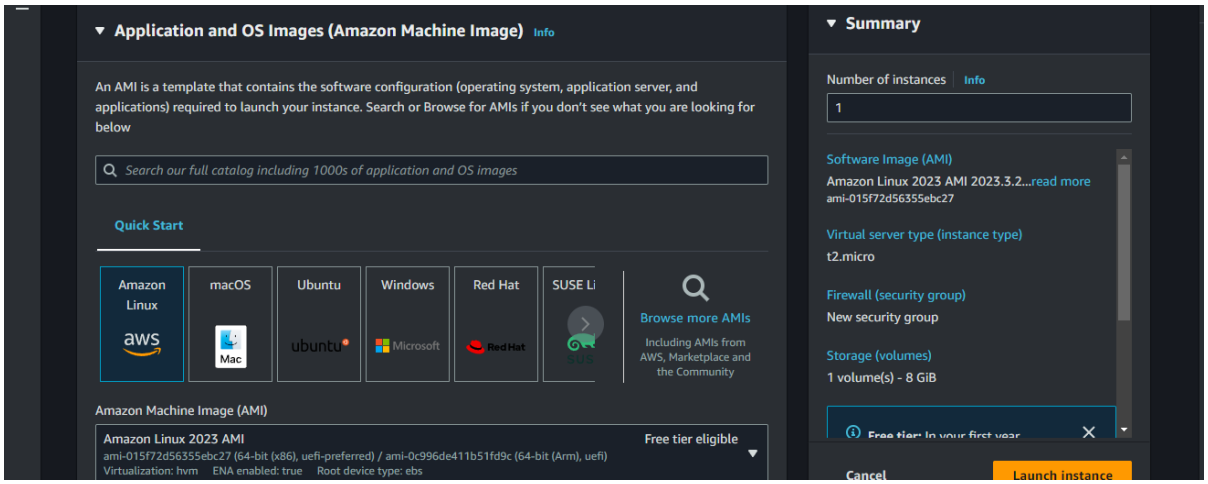
Give me name



Step 3: Choose an Amazon Machine Image (AMI)

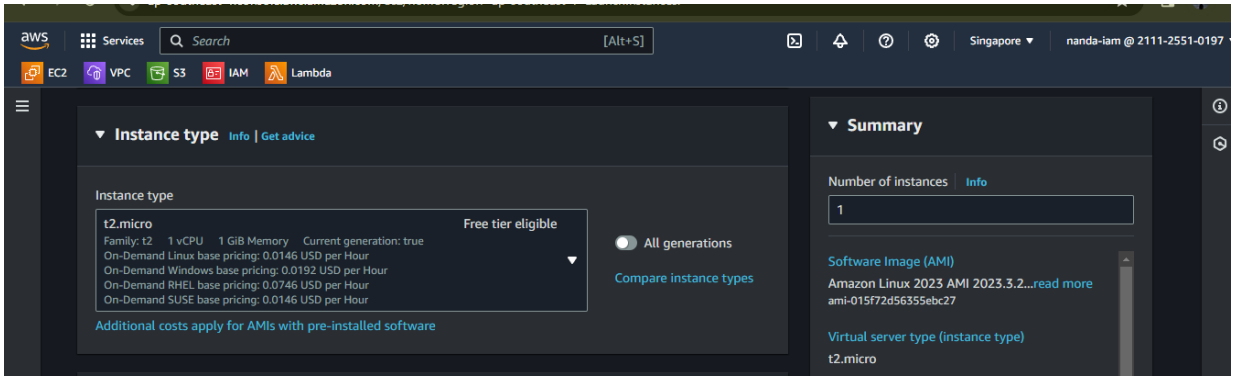
- I am going with Amazon Linux 2023. It is also eligible for a free tier. You can select as per your requirement.

- If you are launching your instance for learning purposes, make sure to select an AMI which says ***free tier eligible*** like in the screenshot below



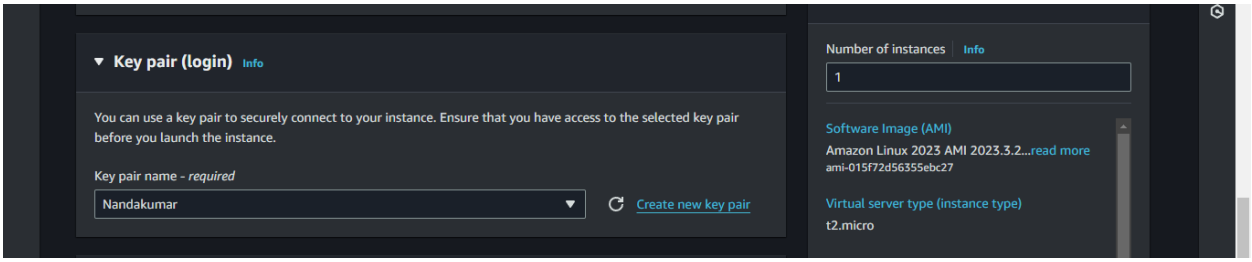
Step 4: Choose an Instance Type

- After selecting AMI, you will be taken to the instance type selection screen.
- Instance Type is basically the selection of hardware configurations for your instance for example CPU, memory, storage, and networking capacity.
- AWS provides a wide range of instance types to fit different use cases.
- I am going with T2.micro because it's free. It provides 1vCPU and 1GB of memory which is good enough for learning purposes

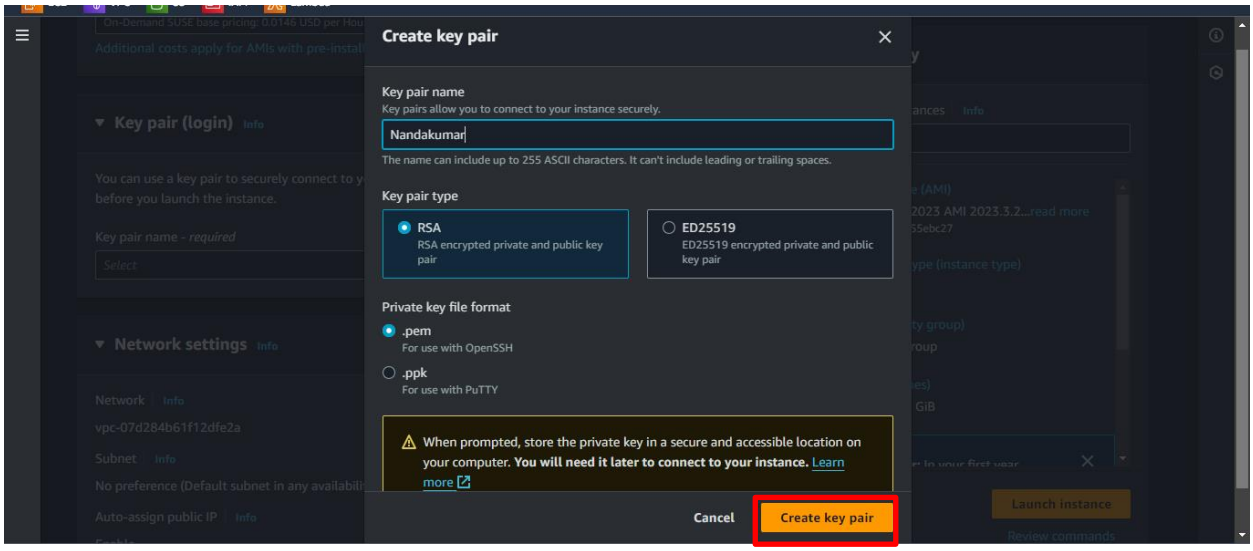


Step 5: Create Key pair

On clicking launch, you will get a popup screen to select an existing key pair or create a new one.

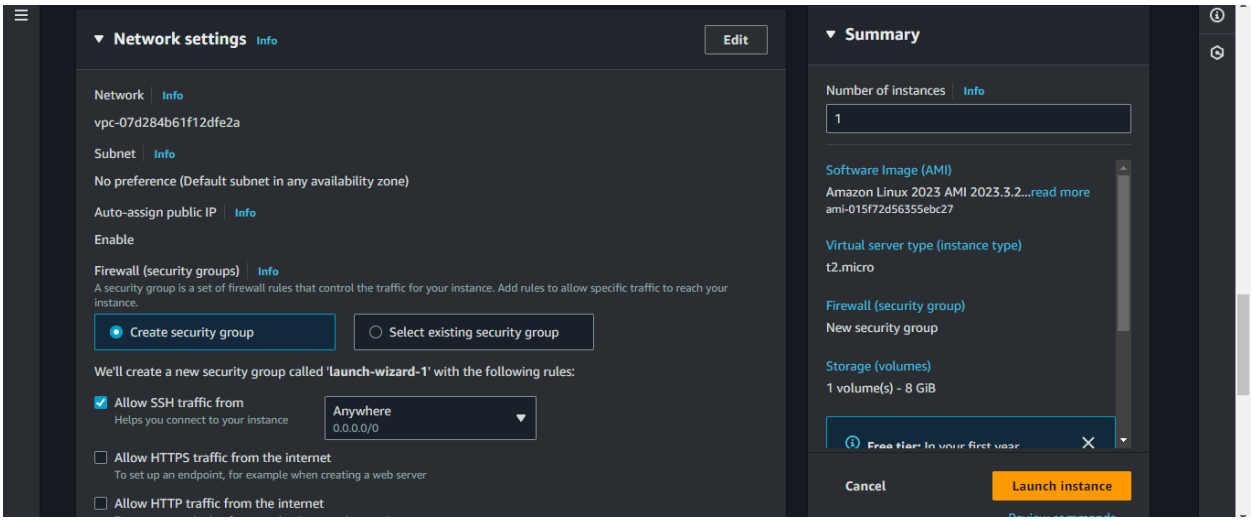


- I am Create new key pair
- To be more precise, You use the private key, instead of a password, to securely access your instances.
- I will go ahead and create a new one.

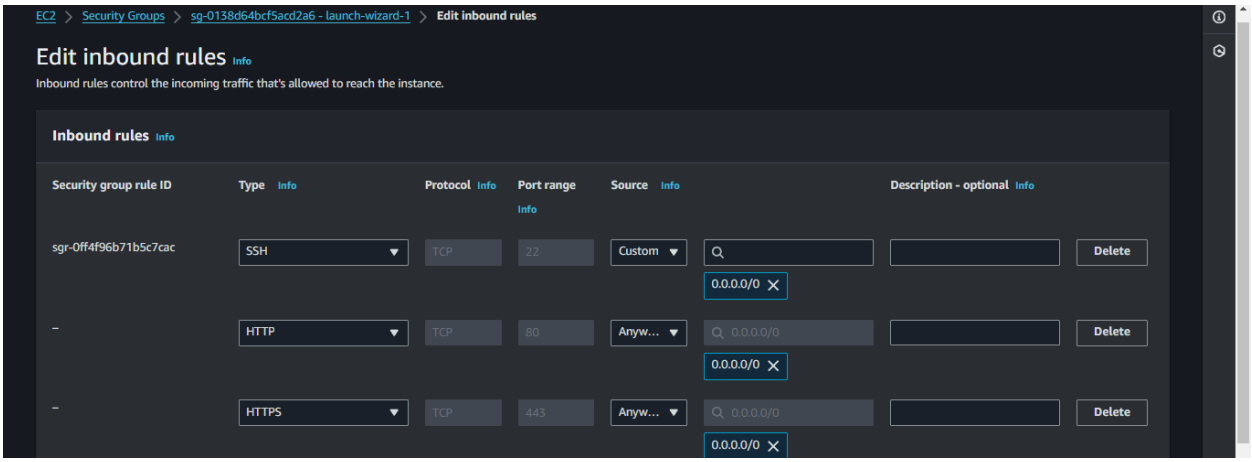


Step 5: Network Settings and Configure the Security Group

- Default network
- Security Group lets you control traffic to and from your EC2 instance.
- It’s basically an additional firewall provided by AWS to let you block unwanted ports or open required ports on SSH
- I have left the default security group config with only 22 ports open for SSH so that I can connect to my instance.



- But, feel free to open 80 or 443 on your instance if you are planning to use your instance like a web server.

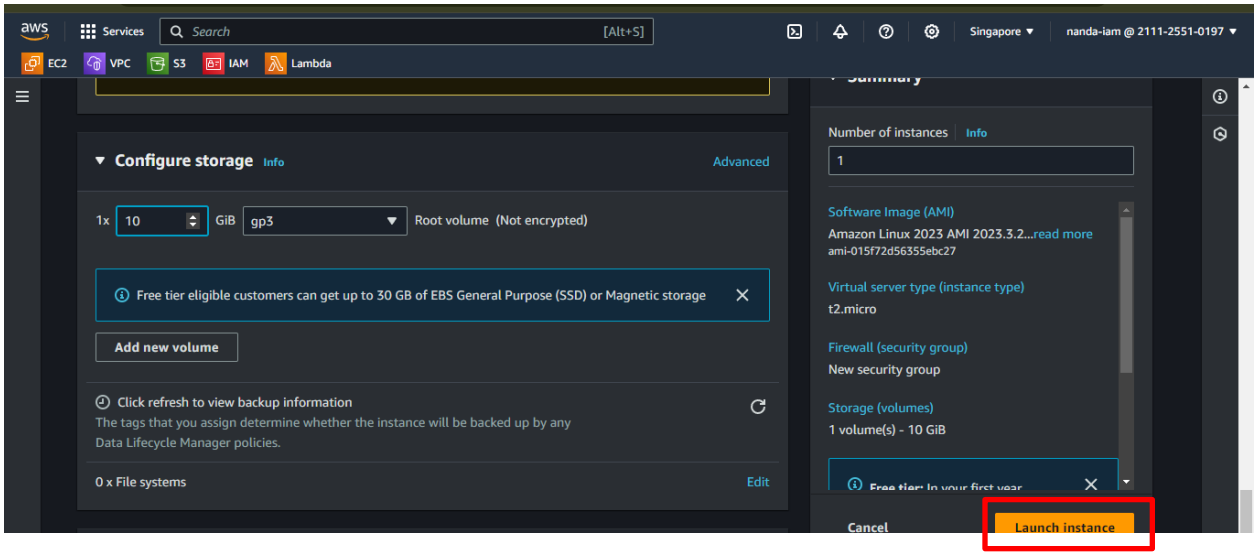


Step 6: Add Storage

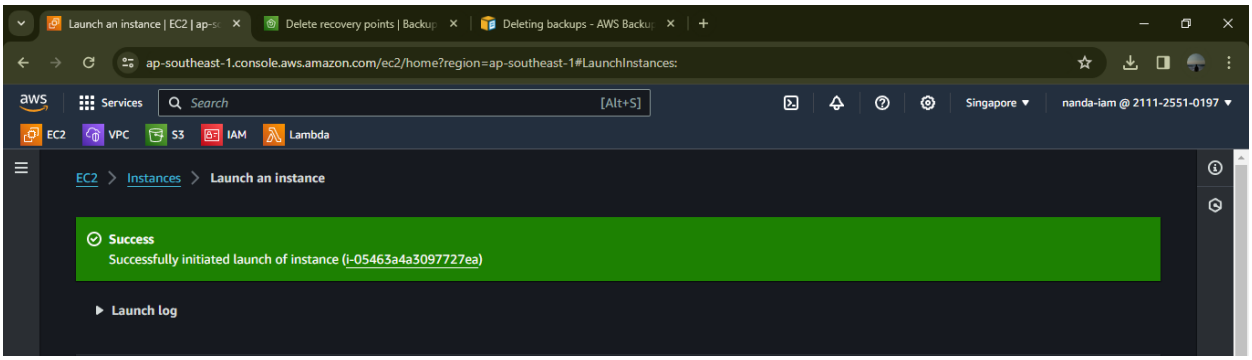
- As the heading says, on this screen you can either modify the root volume
- I am going with 10GB only but please feel free to tweak this as per your requirement.

Step 7: Review and Launch

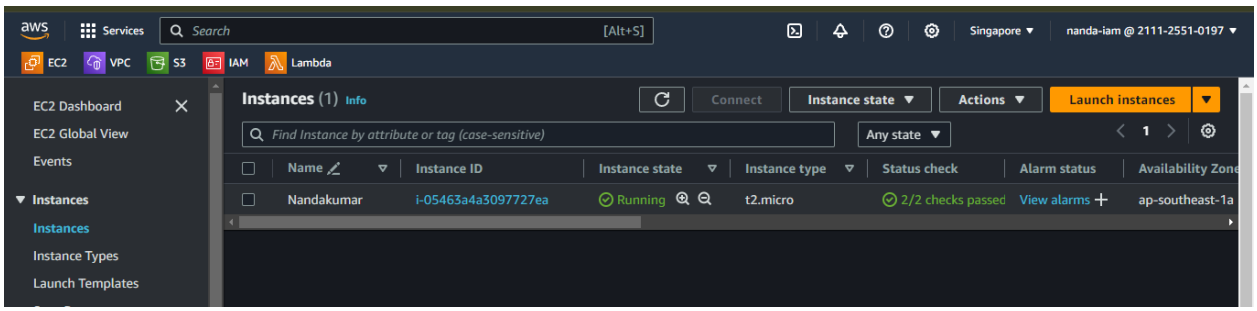
- Review all your selected configurations. You can always go back and change anything you want either by clicking the previous button or directly by clicking on a specific step.
- If everything seems to be good, you can click on Launch.



You will see the status that your instance is launching below.

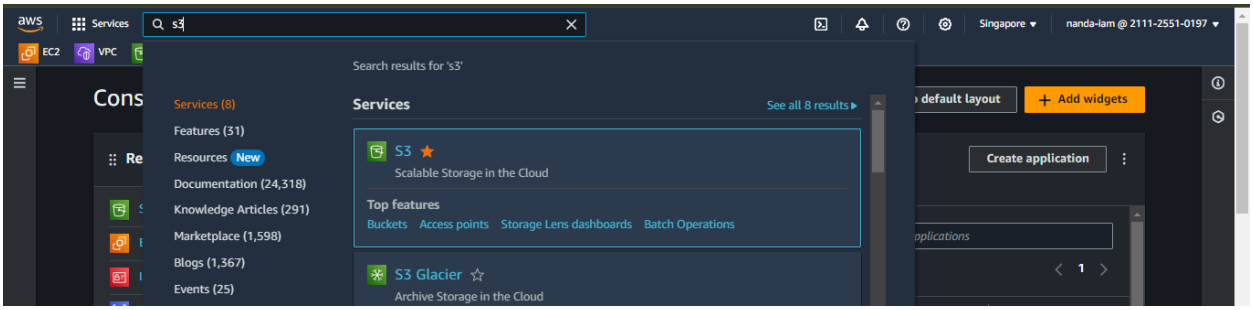


click on instances You will see like below.
Instance state is Running. You can click on the Instance ID to see more details about your instance.

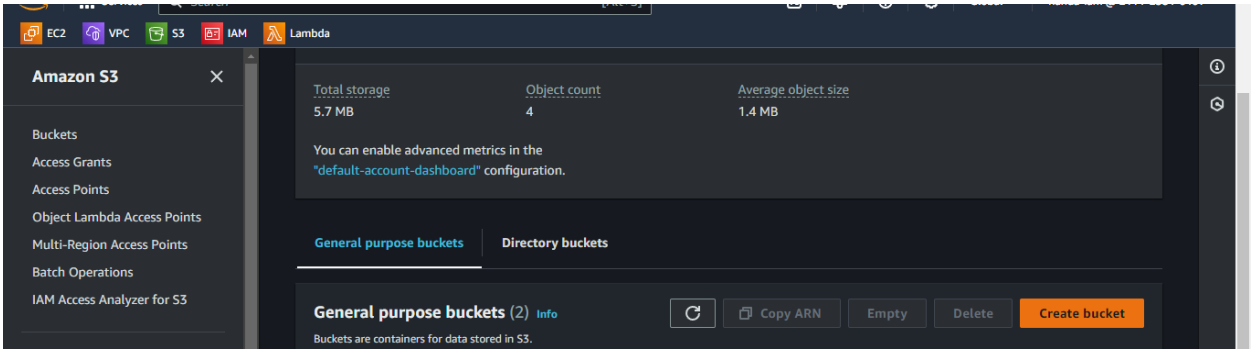


Step 8: Create an S3 Bucket

Login to AWS Management Console**, type s3 in search bar and click on it to open S3 console.**

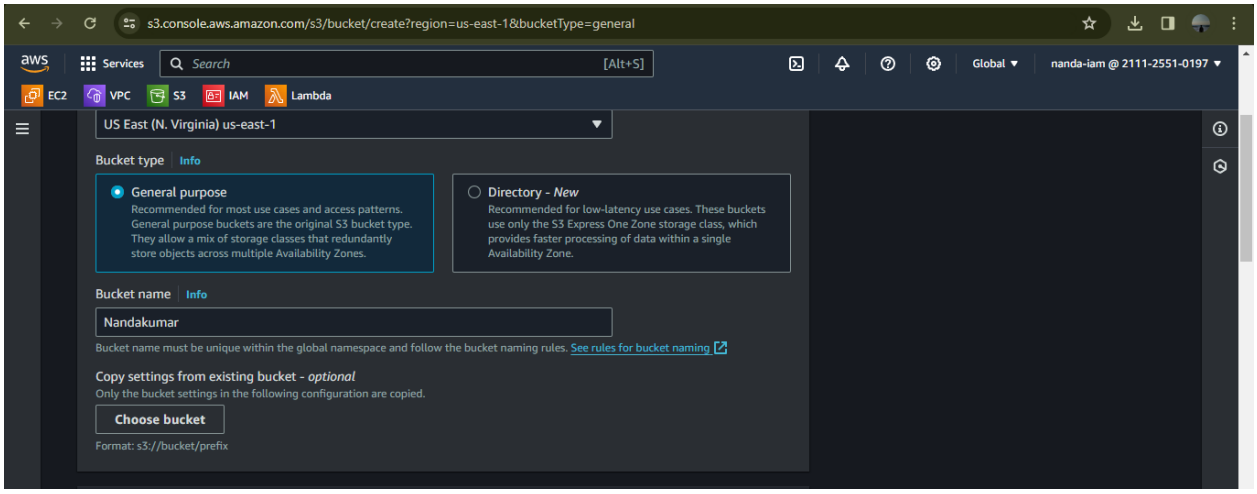


Once you see dashboard, click Create Bucket

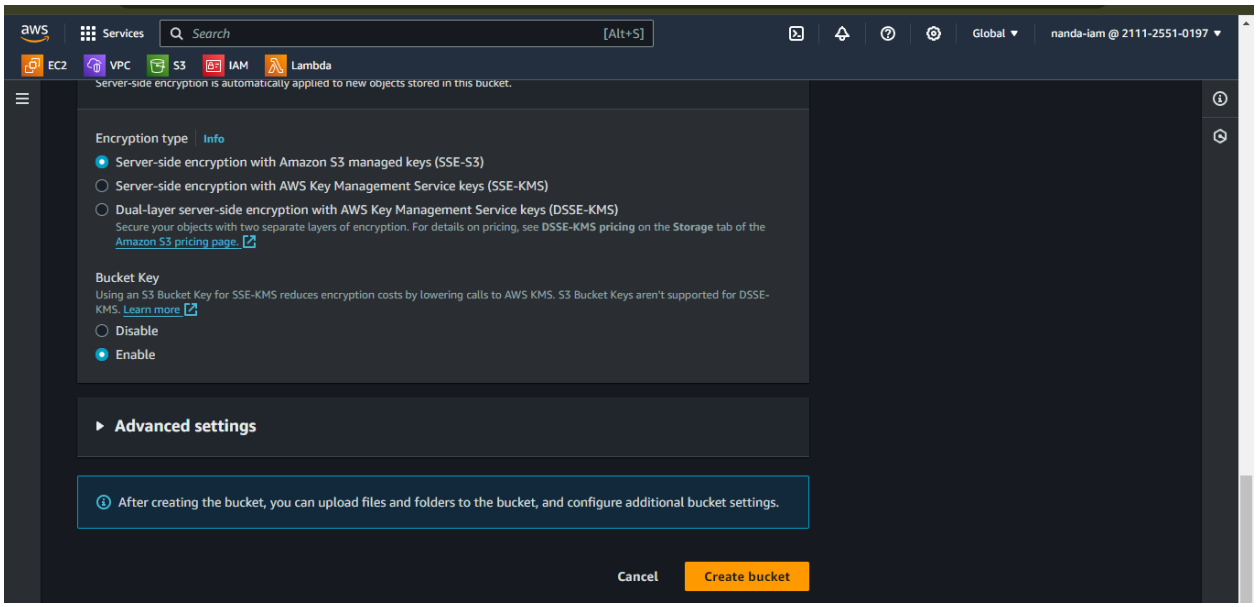


Next, choose a region where you want your s3 bucket to reside

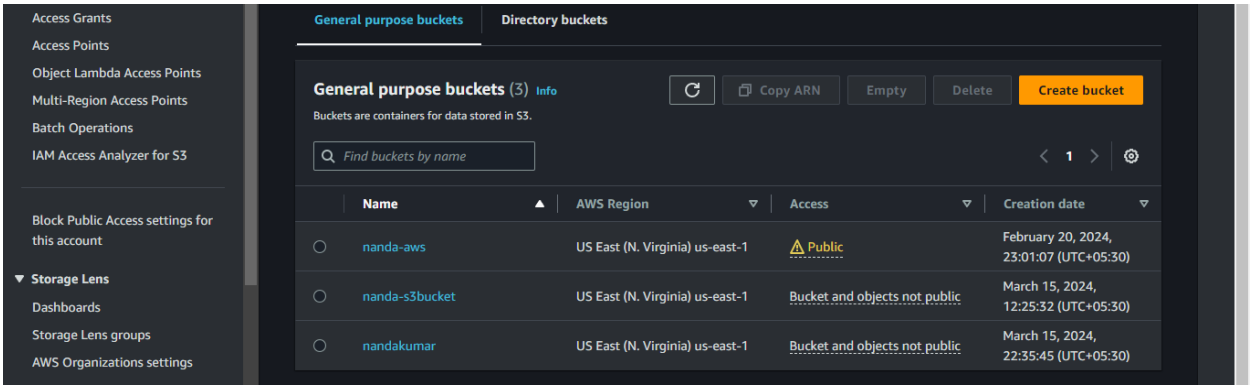
Provide a unique name for your bucket, as names in S3 are unique globally. That means, once you name your bucket "**Nandakumar**"



After putting the name and region, let's leave all other details to default and scroll down the page to find create Bucket button. Click on ***Create bucket***.

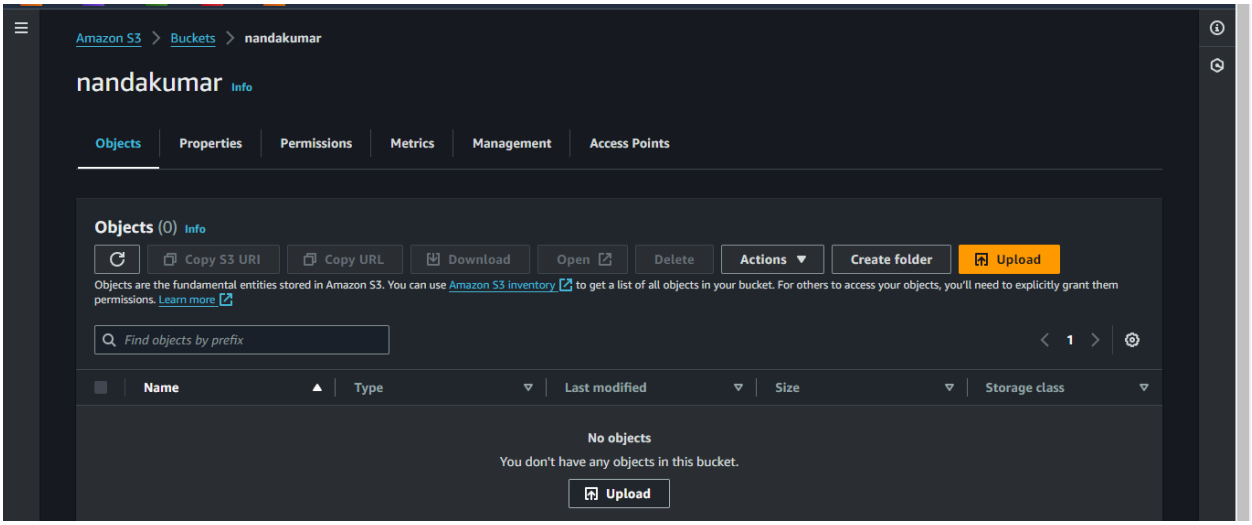


You have created your **nandakumar** s3 bucket



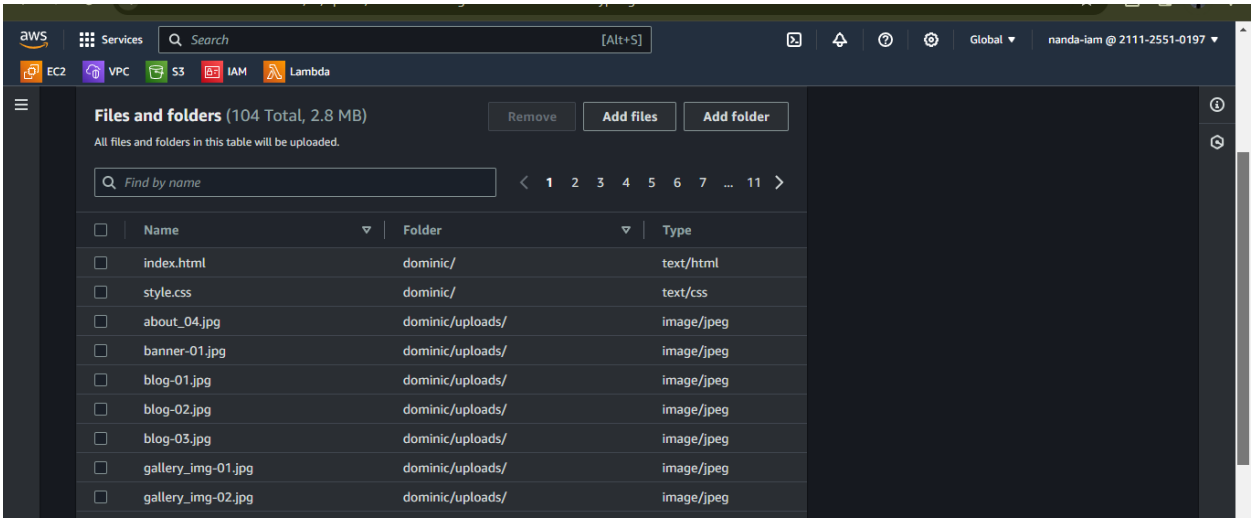
Step 9: Upload an Object

- Click on the **bucket name** link to navigate inside the bucket. Once inside, you can upload your file
- Click on ***Upload***

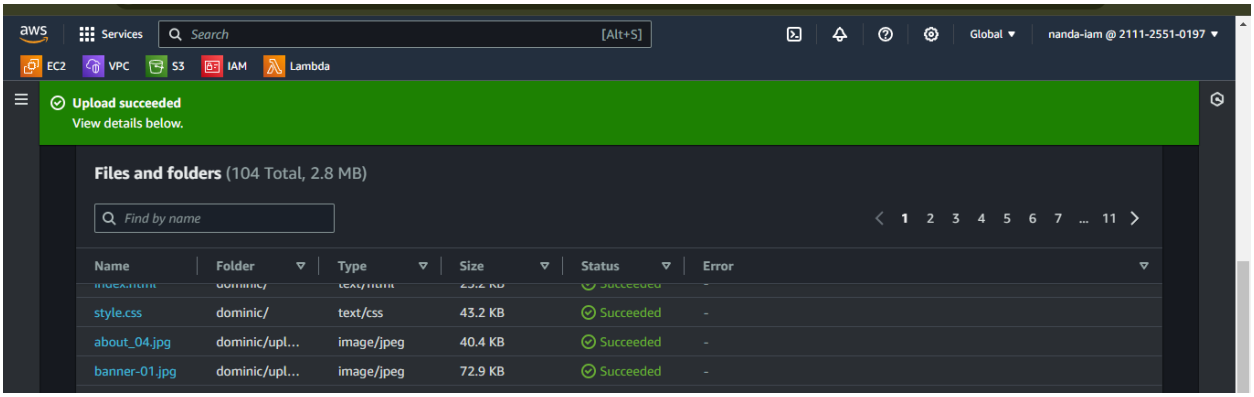


- Click on ***Add files***

- Select file from your local system. Once file is loaded, Scroll down the page and click on ***Upload***



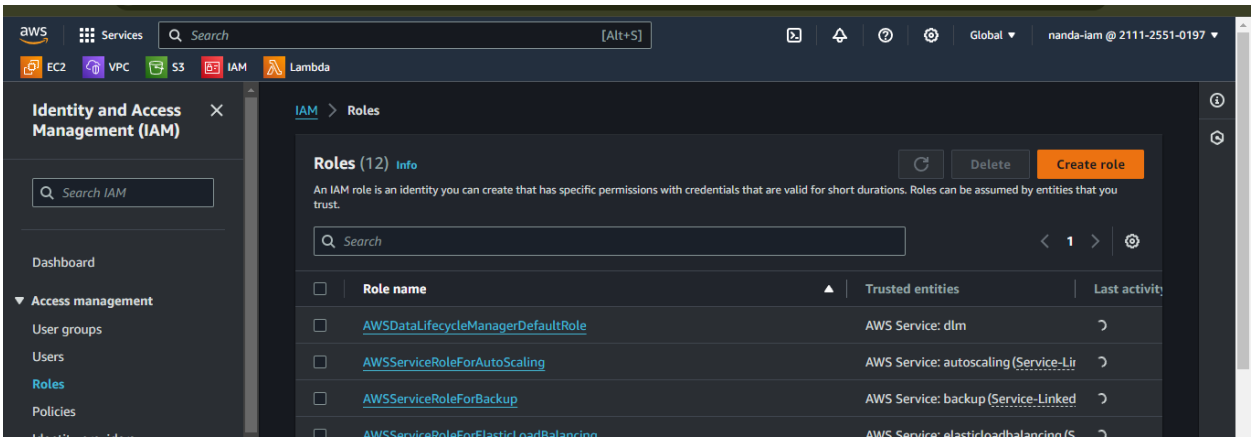
- Depending on the file size it will take some time to upload your file and once done, you will see below success message.



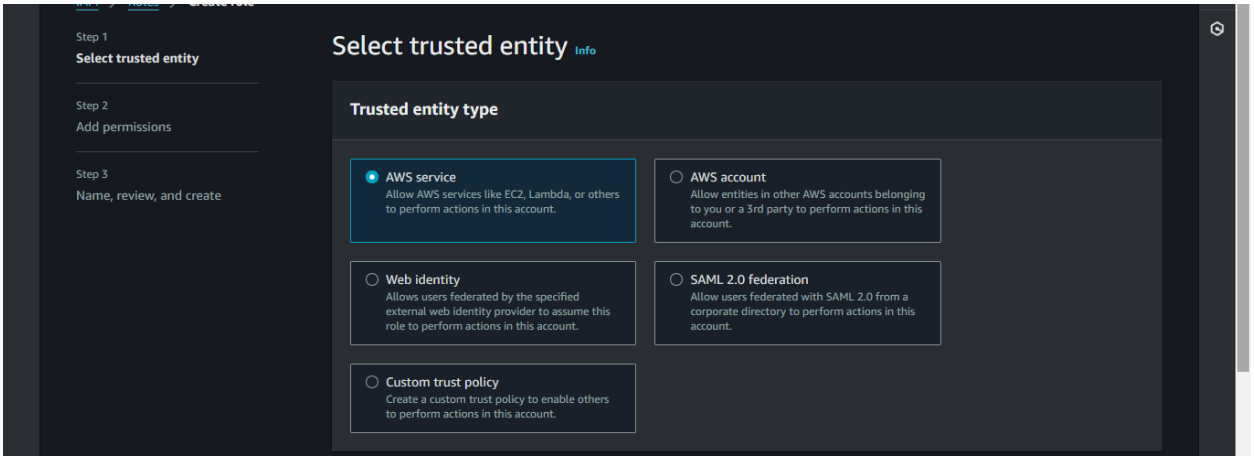
Step 10: Create an IAM Role

Create an IAM instance profile that grants access to Amazon S3.

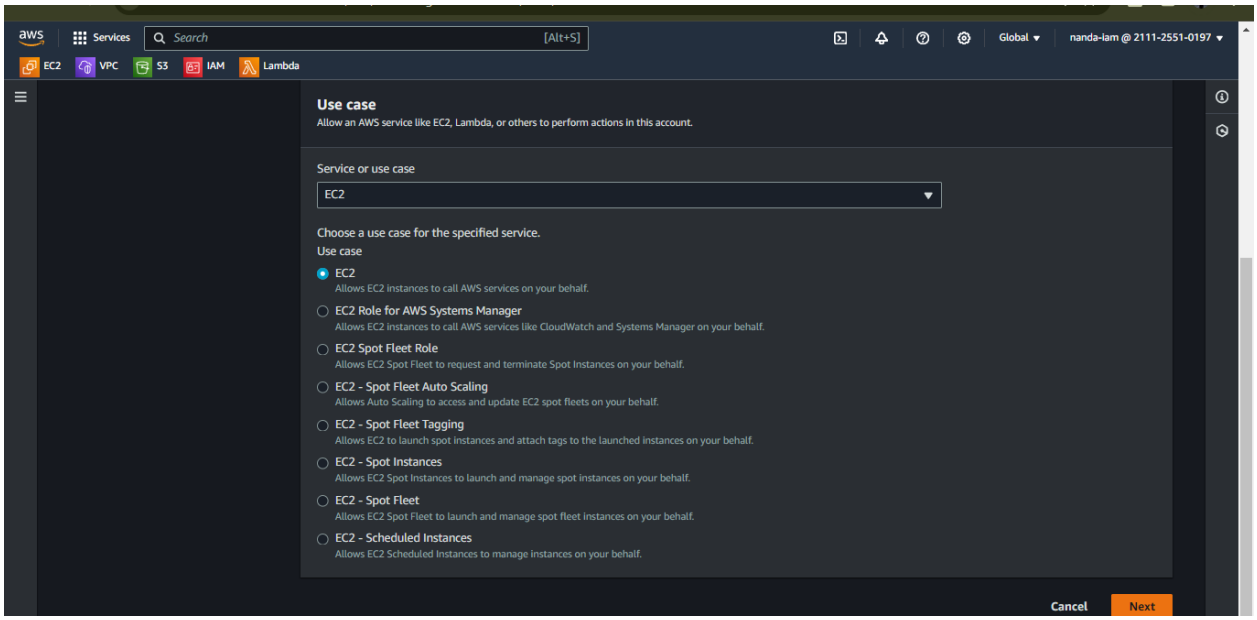
- Open the **IAM** console.
- Choose Roles, and then choose **Create role**.



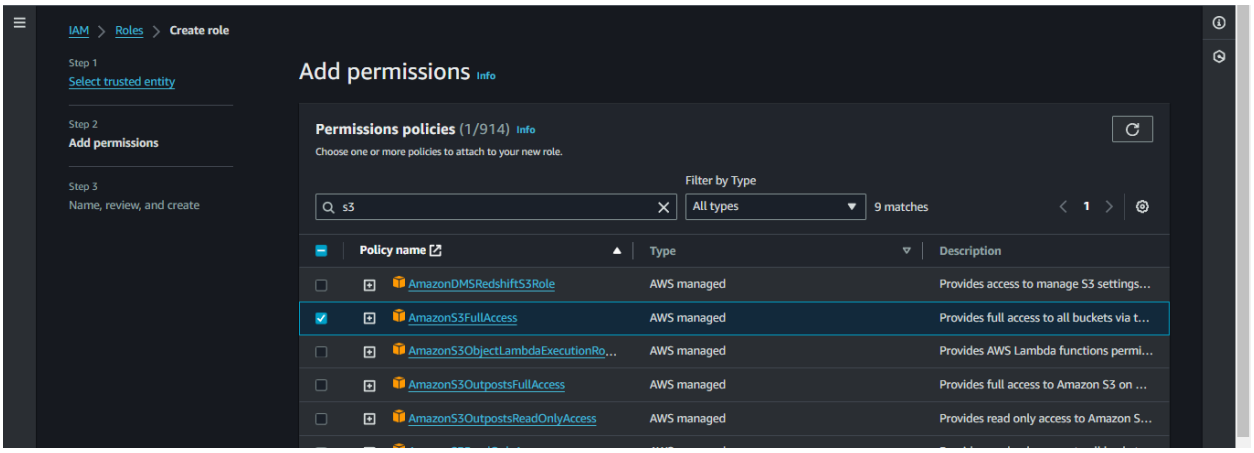
- Select AWS Service.



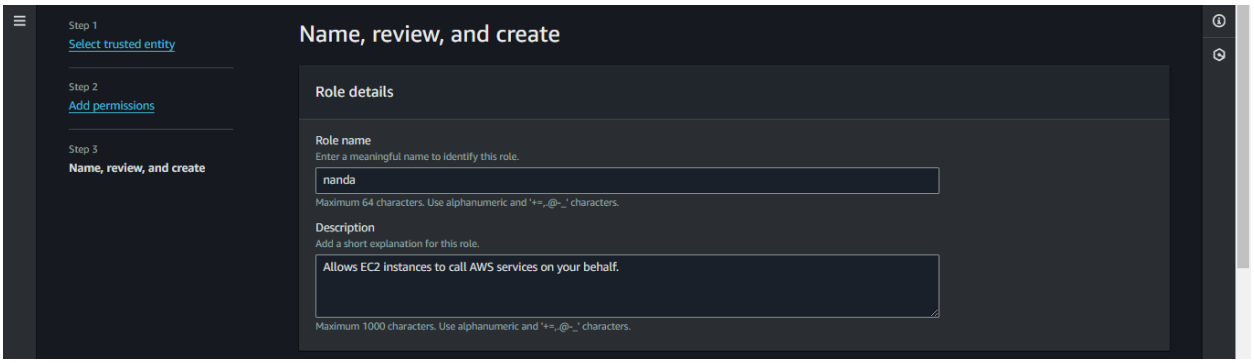
- then choose **EC2** Click Next



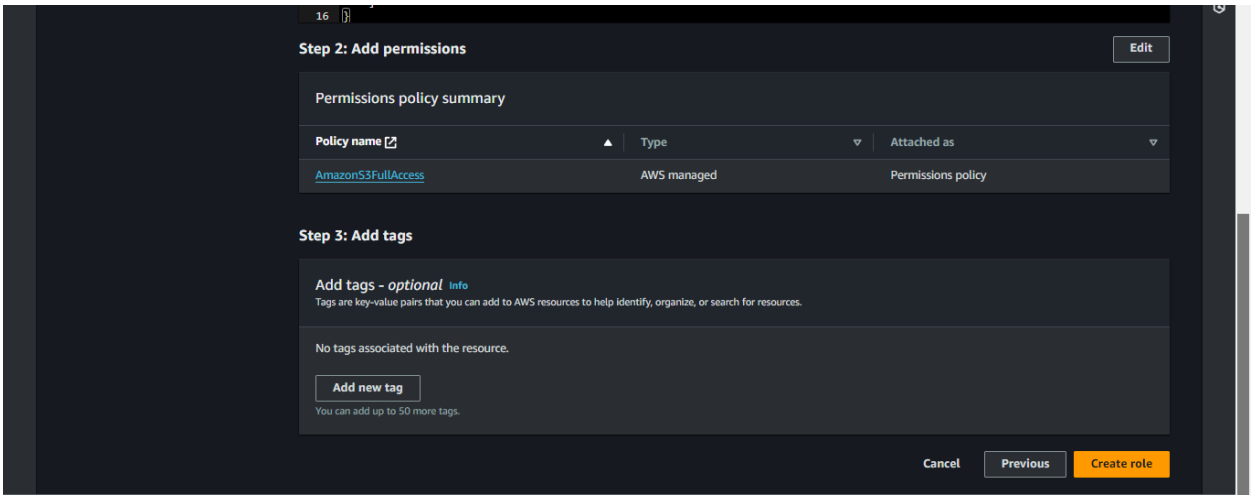
Add Permissions Create a custom policy that provides the minimum required permissions to access your AmazonS3 Full Access



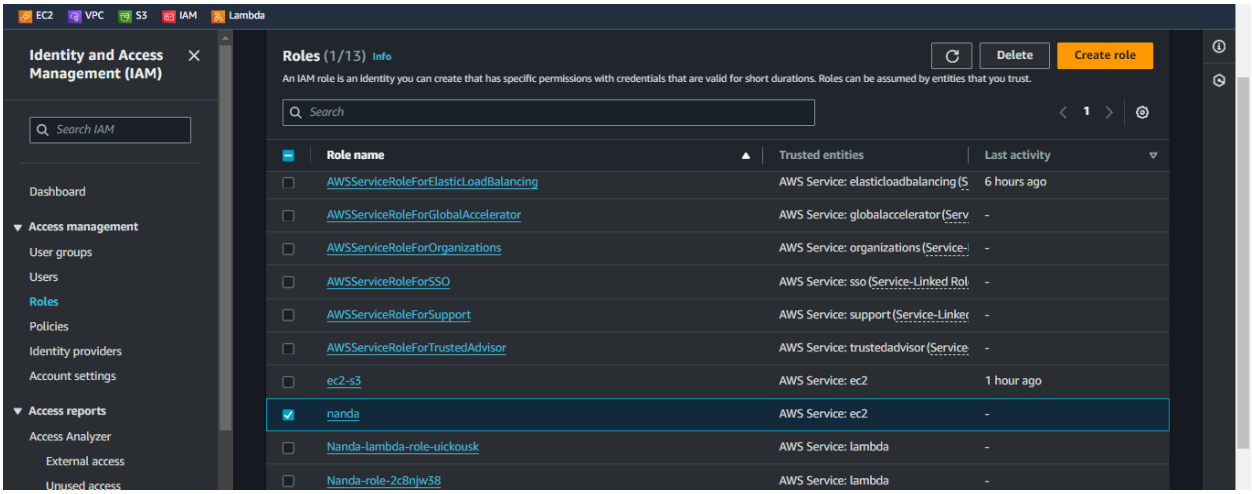
Next Your will Create IAM role Name is nanda



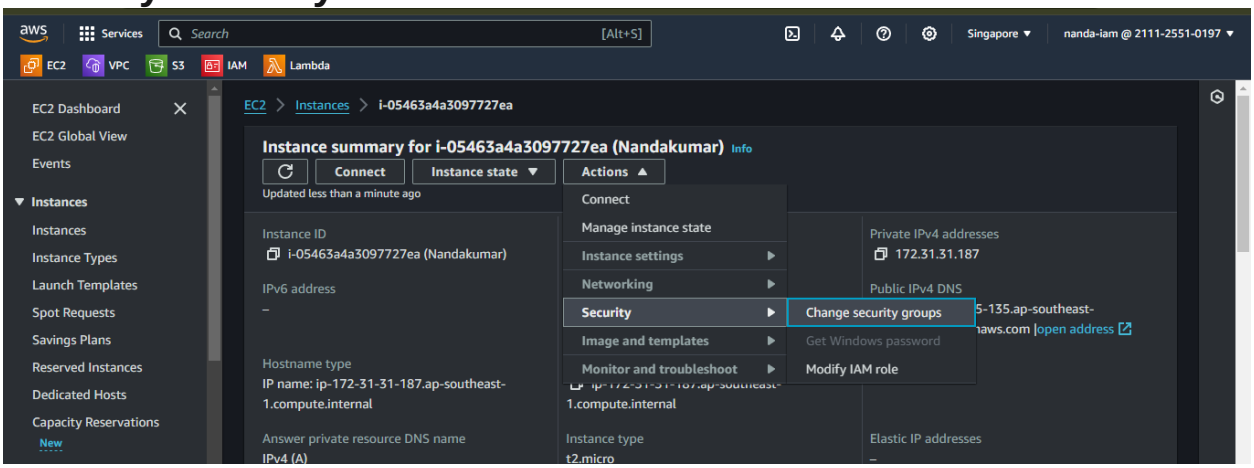
let’s leave all other details to default and scroll down the page to find create Role button. Click on **Create Role**.



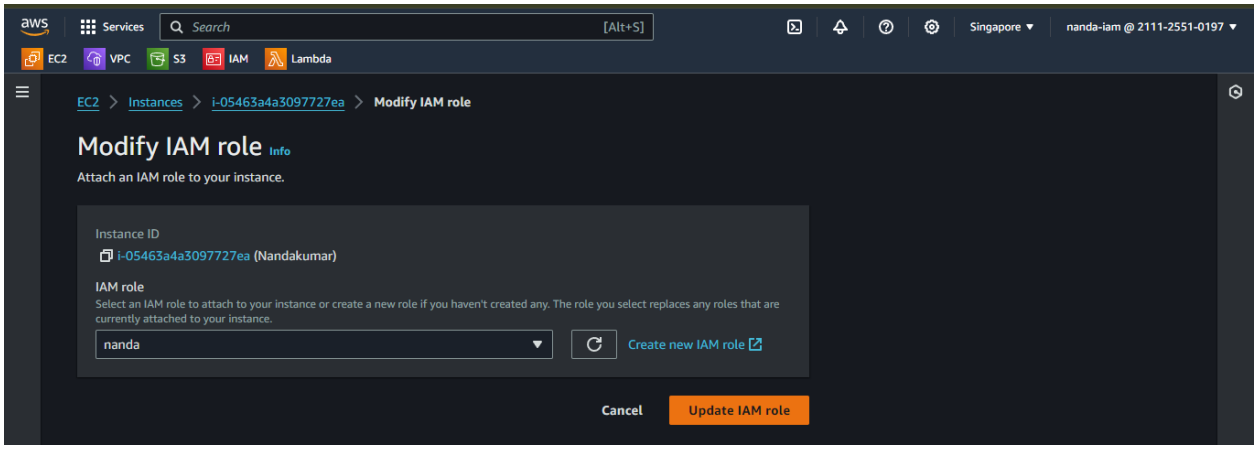
This Your created New nanda role is here



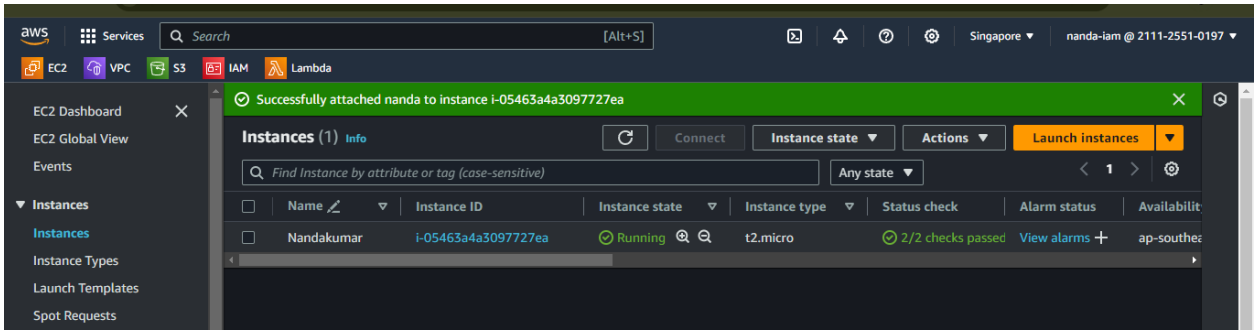
- Launch an EC2 instance
- For this click on checkbox on that instance and go to **Actions tab > Security > Modify IAM role.**



Now select the IAM role that you created in step-1 then save it. This will assign the IAM role to your ec2 instance.



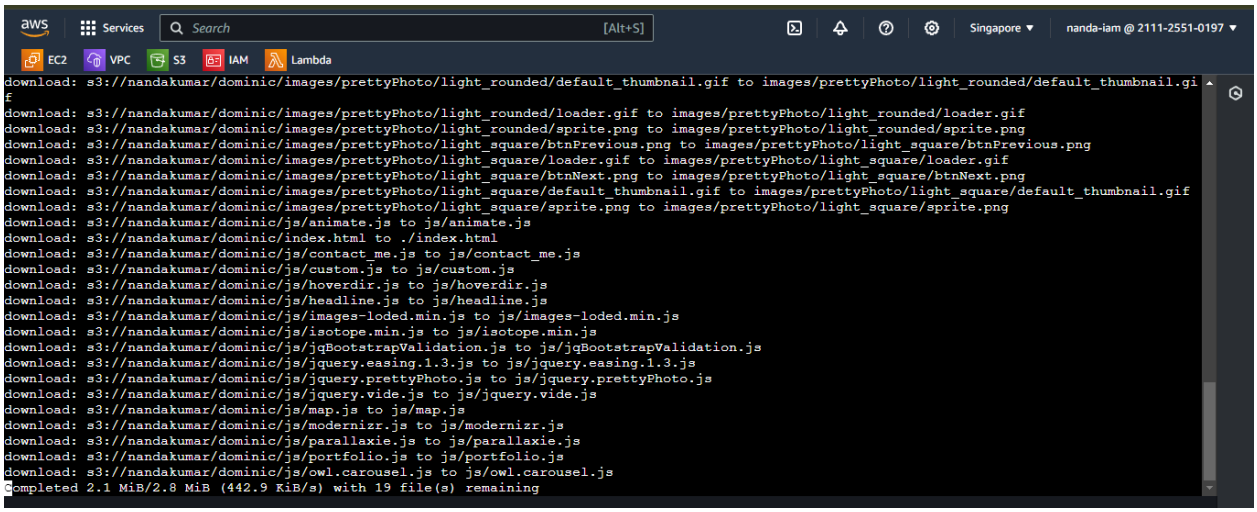
You will see the status that your instance is launching below.

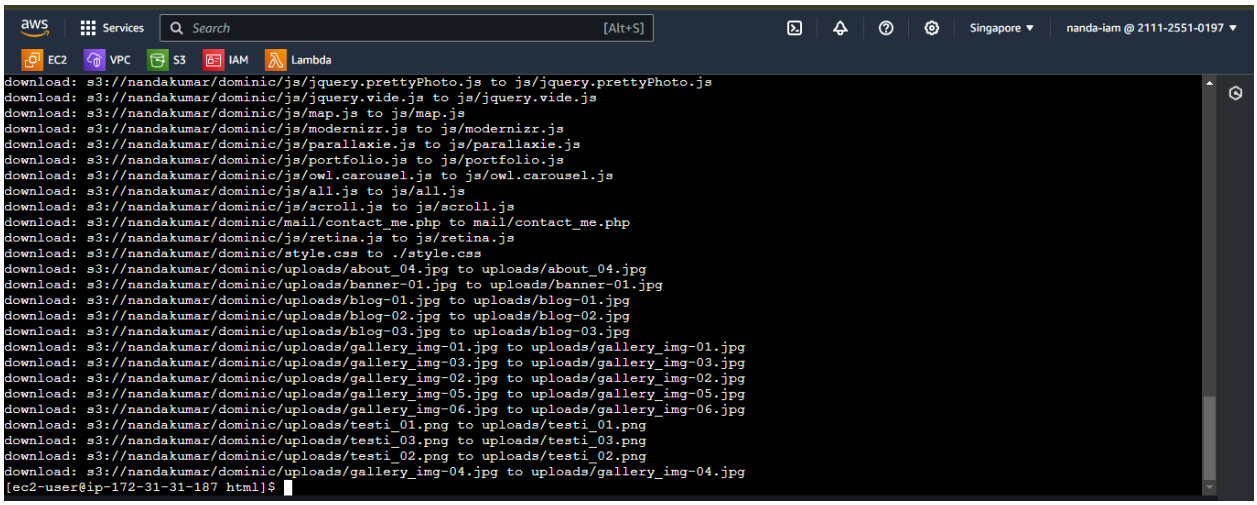


Step 11: Lunch Instance

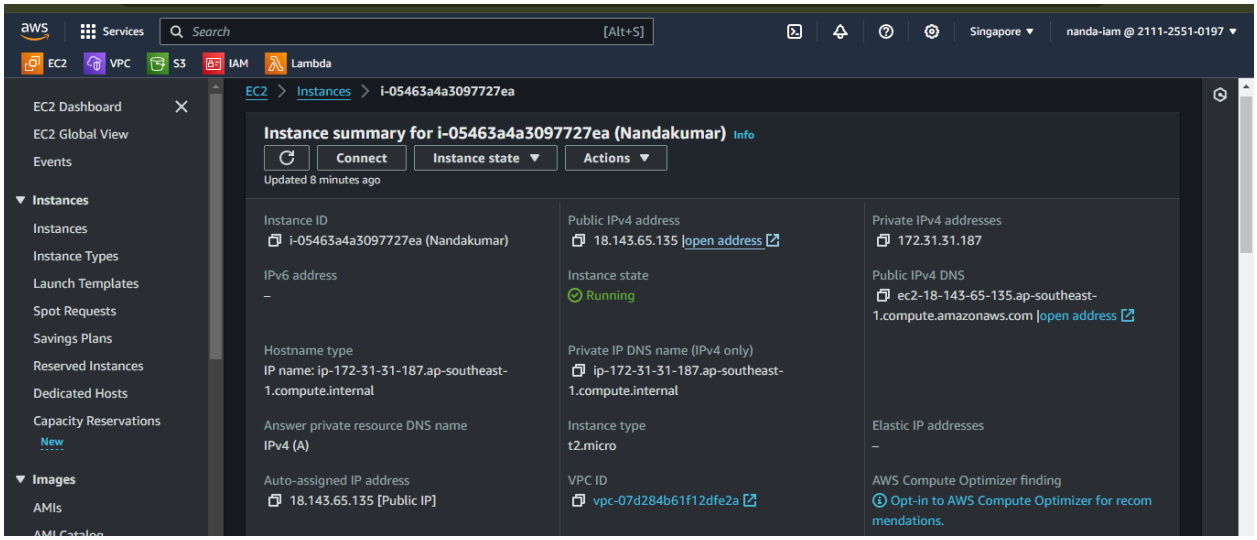
- First to list the S3 Bucket
- Then Run the AWS s3 **cp** command to copy the files to the S3 bucket and vice versa but remember to give IAM role **AmazonS3FullAccess**
- Now as we have also installed the aws command line you can simply use the following commands to copy the files to S3 Bucket from EC2.

To Copy the Files from EC2 to S3





You Click on Public IPV4 Address



You have successfully deployed/hosted your Static Website in EC2 with S3