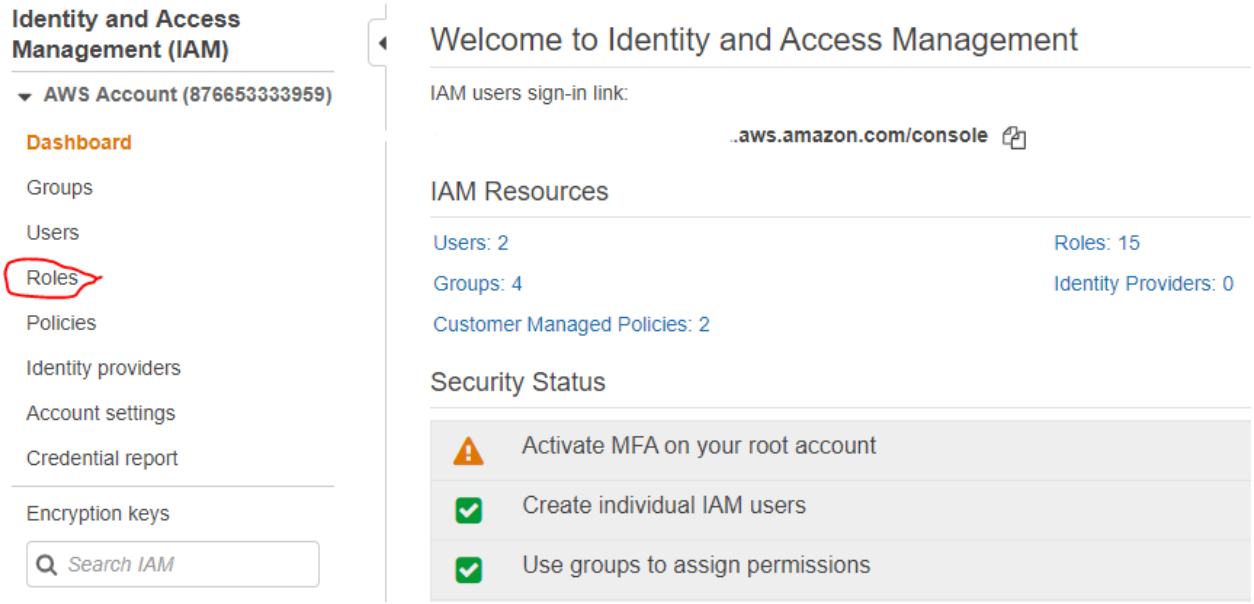
Auto Assign Elastic IP to EC2 Machine

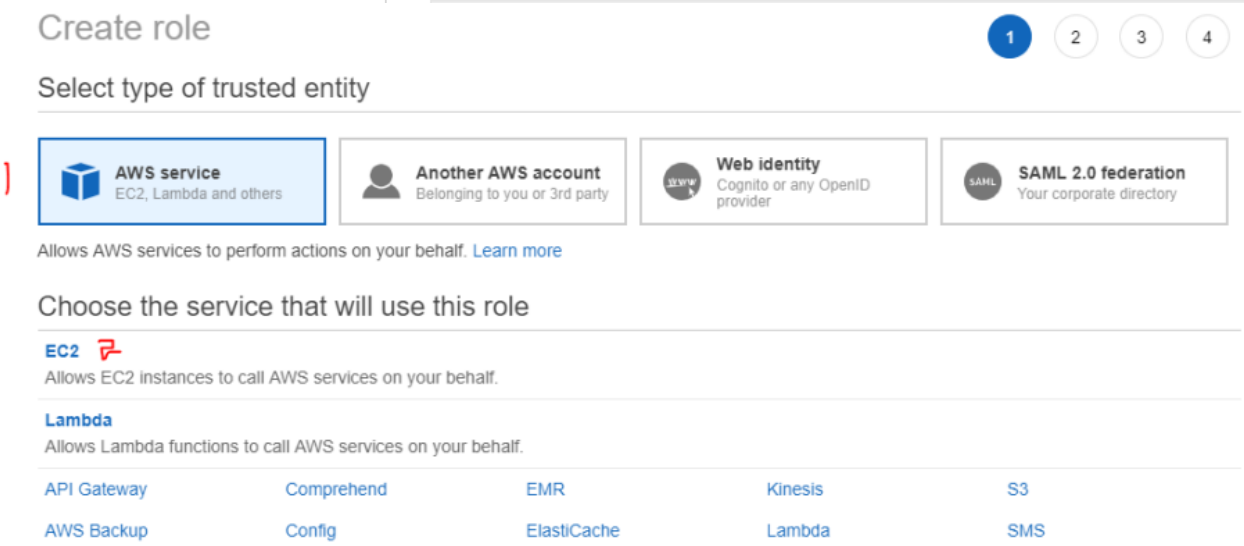
Auto Assign Elastic IP to EC2 Machine
Steps to auto assign elastic IP to EC2 machine

1. Create IAM Role
2. Create AMI
3. Create launch Configuration
4. Create Auto Scaling Group

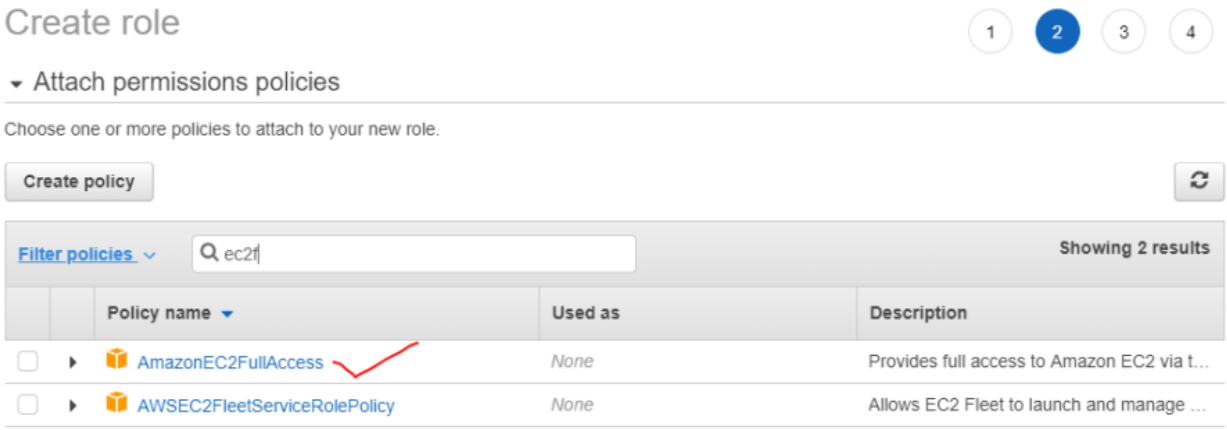
1. Create IAM Role

To create the IAM Role, login to AWS Console, navigate to IAM, select the Roles, to create the new role. Click on the button 'Create new role' as below screens.





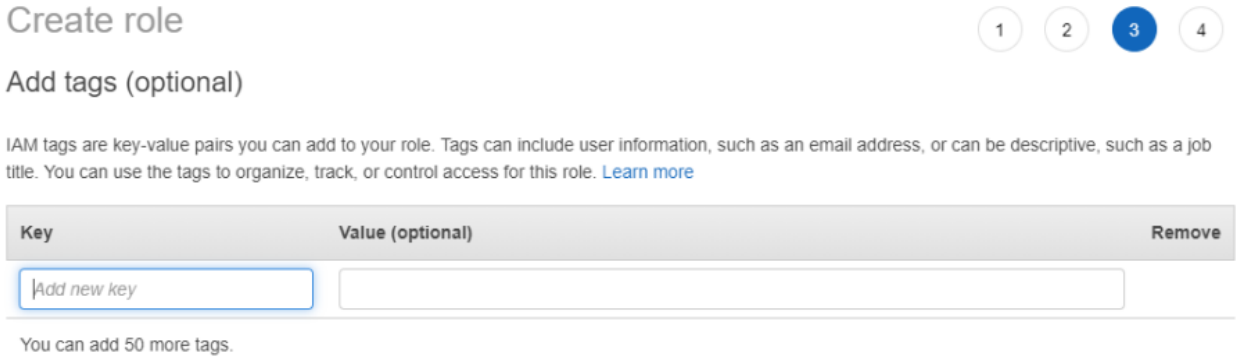
Select the AWS service and EC2 options to give access to the role and click on the button 'Next permissions' to add either existing policy or created policy as below

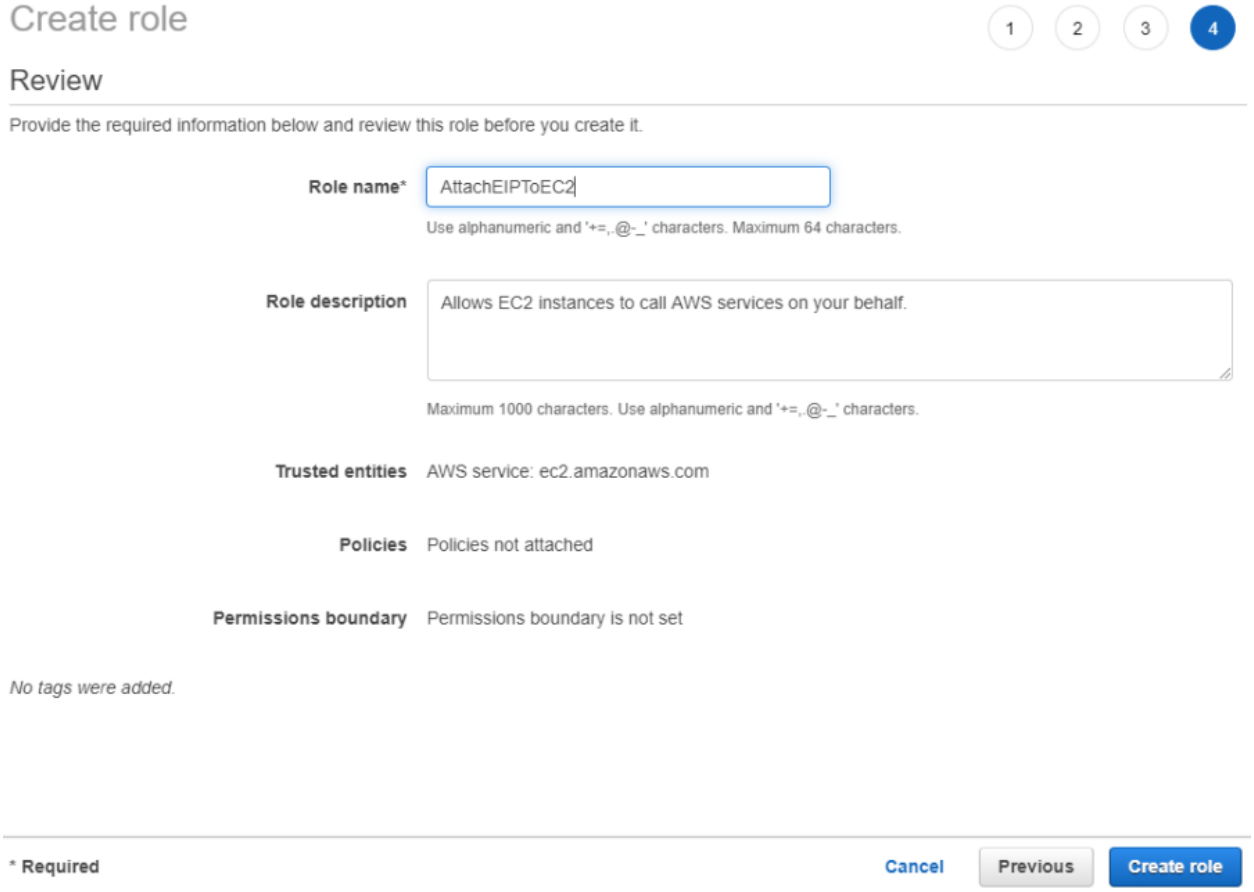


The above ec2manageEIP written by us as below and then click on the button 'Next : Tags' {

```
"Version": "2012-10-17",
"Statement": [
{
"Sid": "VisualEditor0",
"Effect": "Allow",
"Action": [
"ec2:DescribeMovingAddresses",
"ec2:DescribeAddresses",
"ec2:DeleteTags",
"ec2:DescribeTags",
"ec2:CreateTags",
"ec2:AssociateAddress"
],
"Resource": "*"
}
]
}
```

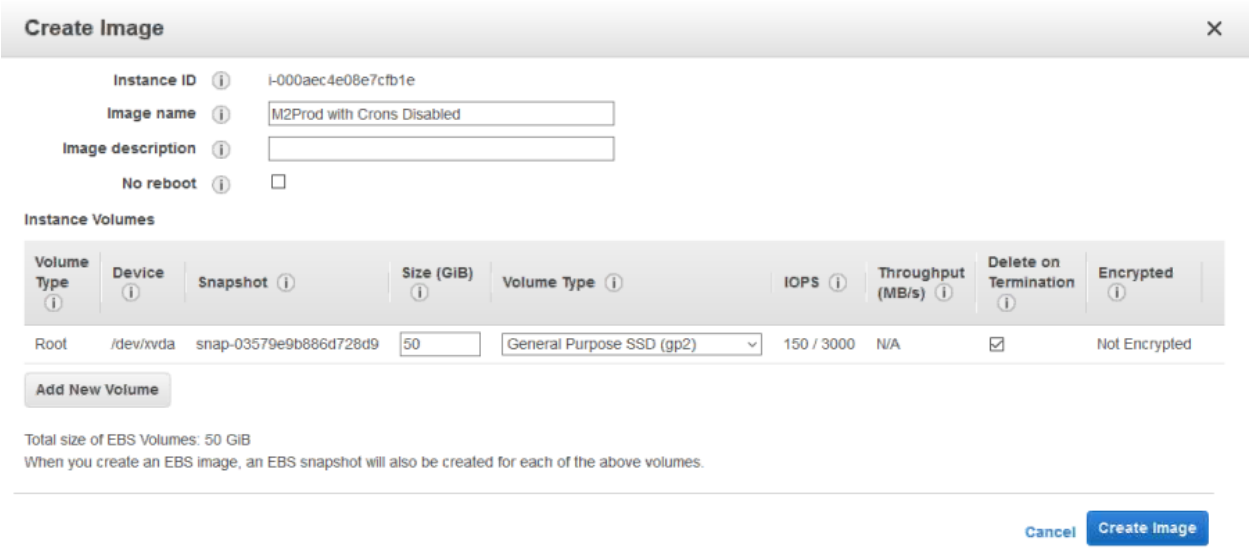
Create the tag by providing Key, Value and move to the next step to create Role as blow and then click on Create Role button to finish the Role.



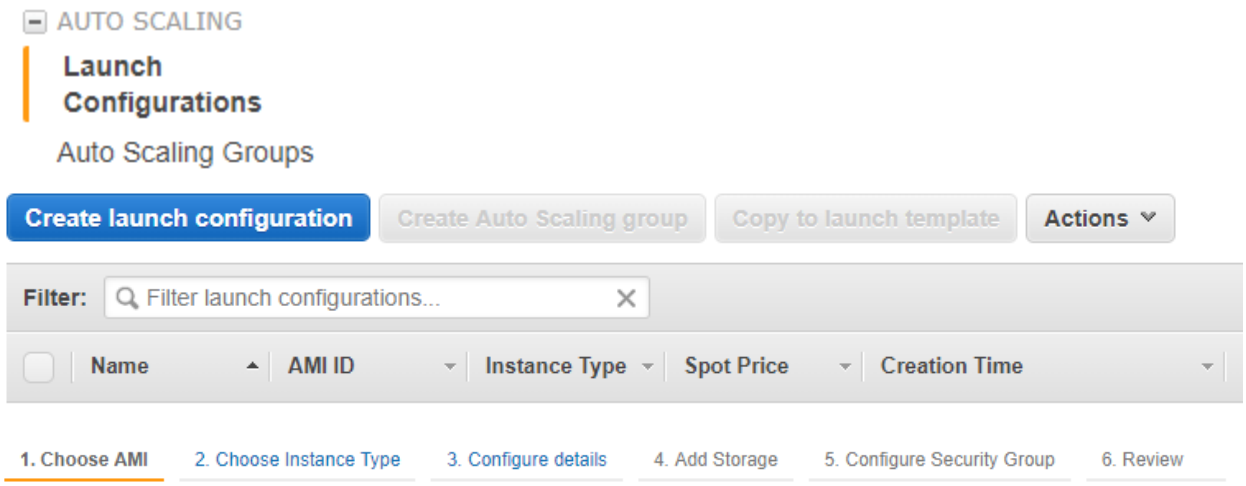


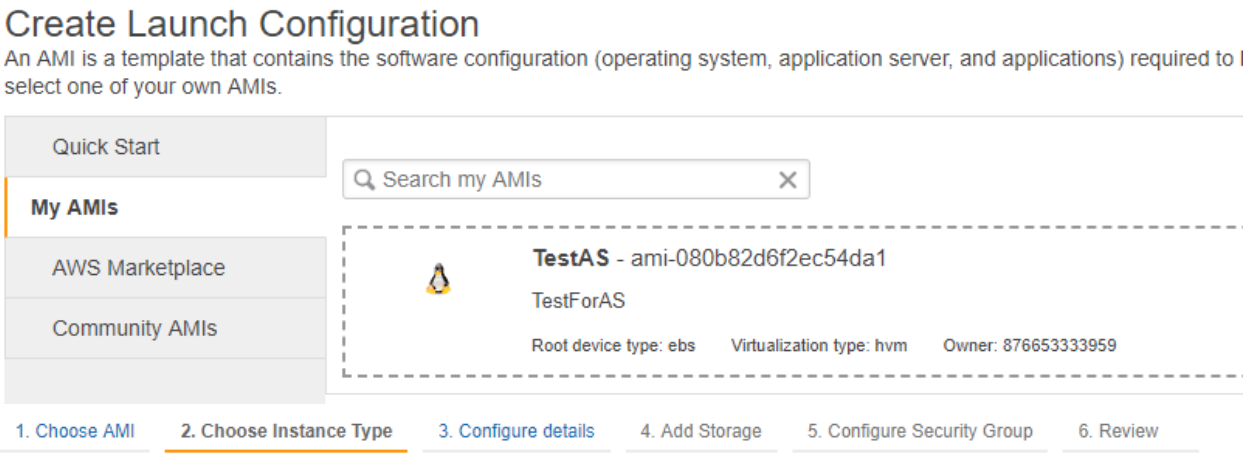
1. Create AMI

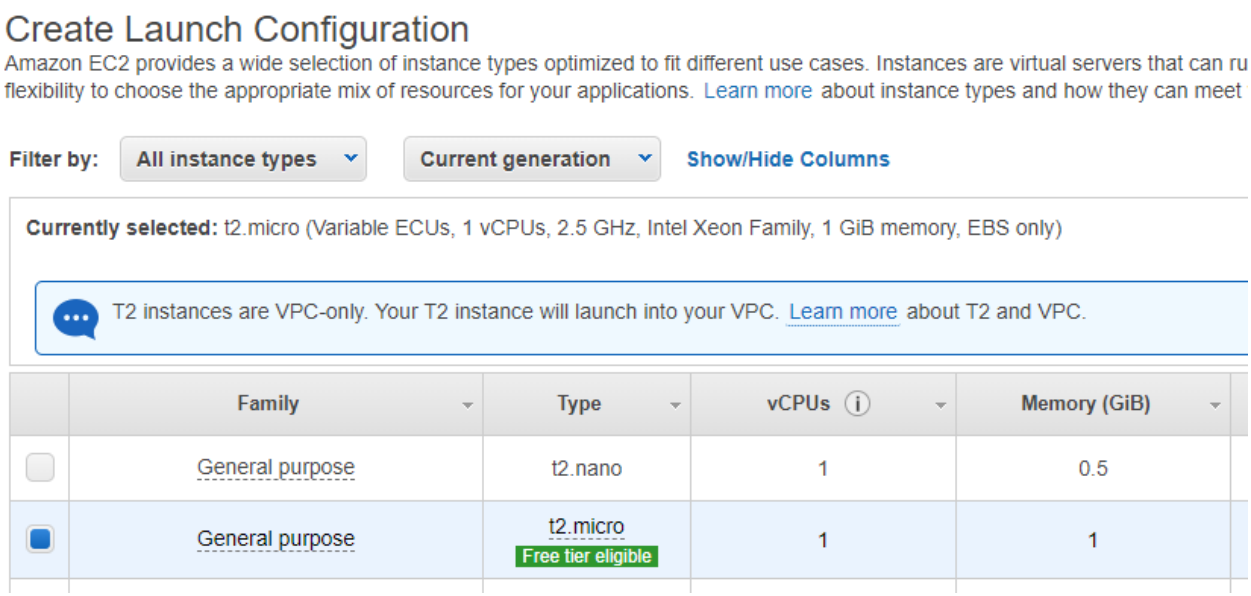
To create the AMI login to AWS Console, navigate to instances, select the required instance and create the AMI from the actions as below.



Click on create button to get the latest image.
3. Create Launch Configuration
To create the launch configuration follow the steps as below
Goto EC2 service and navigate to launch configuration option and click on the Create launch configuration button







While configuring the details, select the Role as shown below, and attach the script as given below.

1. Choose AMI | 2. Choose Instance Type | **3. Configure details** | 4. Add Storage | 5. Configure Security Group | 6. Review

Create Launch Configuration

Name

Purchasing option — Request Spot Instances

IAM role — MANAAGEEIP

Monitoring — Enable CloudWatch detailed monitoring
Learn more

Advanced Details

Kernel ID — Use default

RAM Disk ID — Use default

User data — As text | As file | Input is already base64 encoded

(Optional)

IP Address Type

Only assign a public IP address to instances launched in the default VPC and subnet. (default)
Assign a public IP address to every instance.
Do not assign a public IP address to any instances.
Note: this option only affects instances launched into an Amazon VPC

Keep the below script in user data box and move to the Add storage step *#!/bin/bash*

```
INSTANCEID=$(ec2metadata --instance-id)
IPADDRESS=$(aws ec2 describe-addresses --region eu-west-1 --filters "Name=tag:instance,Values=not" | grep '"PublicIp"' | tail -n1 | cut -d\" -f 4)
EIPALLOC=$(aws ec2 describe-addresses --region eu-west-1 --filters "Name=public-ip,Values=$IPADDRESS" | grep 'AllocationId' | cut -d\" -f 4)
aws ec2 associate-address --region eu-west-1 --instance-id $INSTANCEID --allocation-id $EIPALLOC
EIPALLOCGOT=$(aws ec2 describe-addresses --region eu-west-1 --filter "Name=instance-id,Values=${INSTANCEID}" | grep 'AllocationId' | cut -d\" -f 4)
aws ec2 create-tags --region eu-west-1 --resources $EIPALLOCGOT --tags Key=instance,Value="yes"
```

1. Choose AMI | 2. Choose Instance Type | 3. Configure details | **4. Add Storage** | 5. Configure Security Group | 6. Review

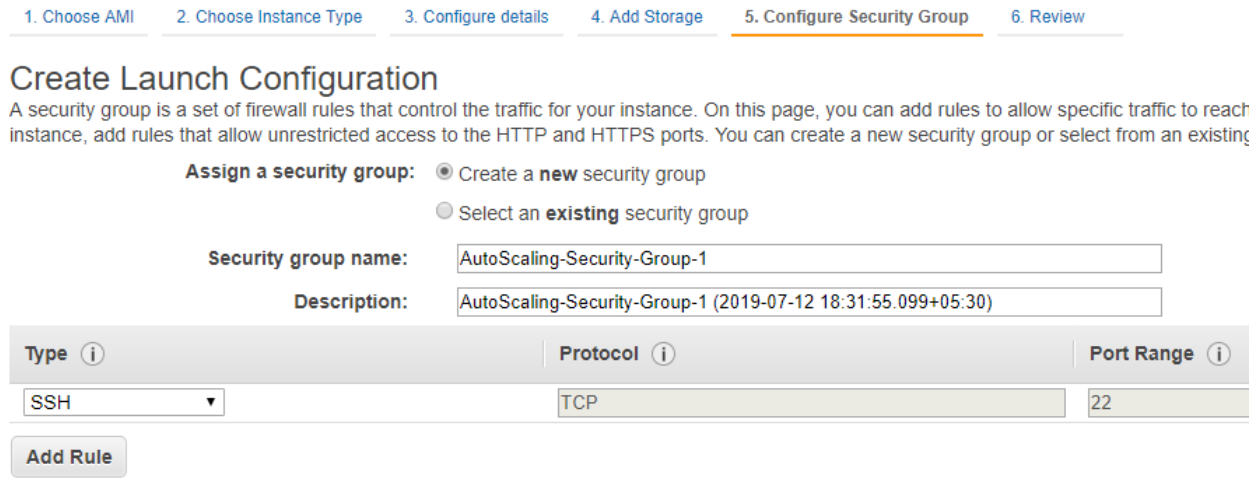
Create Launch Configuration

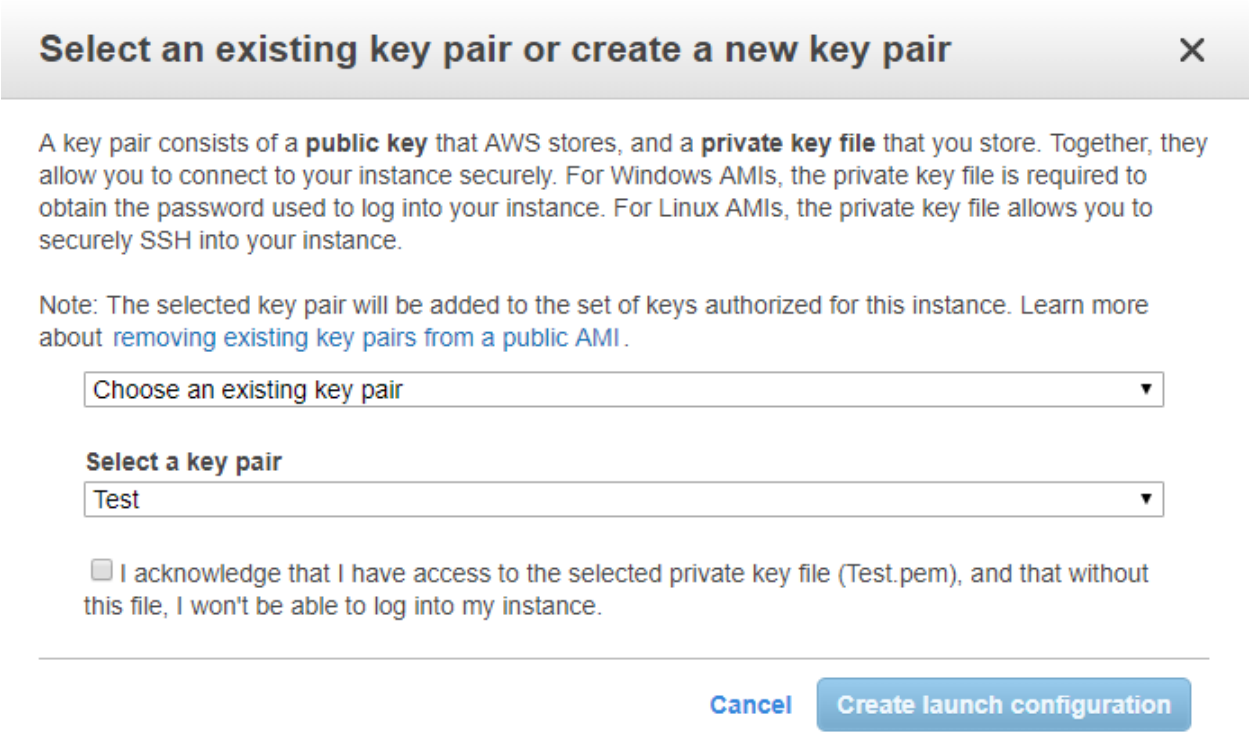
Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store v
edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store vc
https://docs.aws.amazon.com/console/ec2/launchinstance/storage about storage options in Amazon EC2.

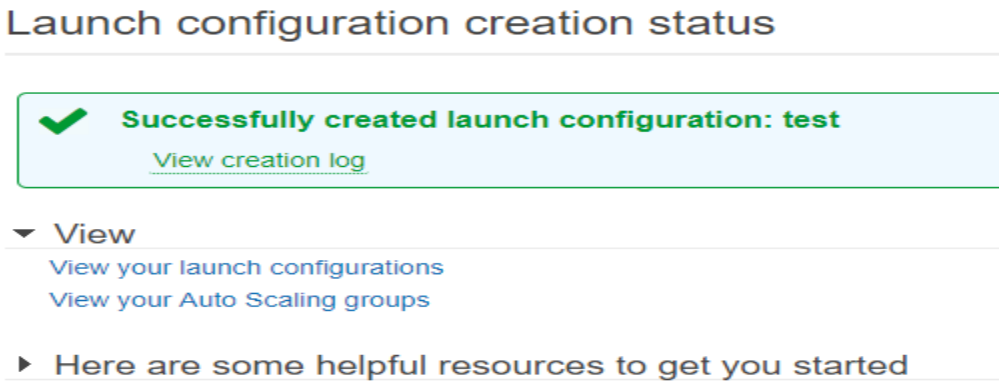
Volume Type	Device	Snapshot	Size (GiB)	Volume Type
Root	/dev/sda1	snap-0e601f5f49a3a3dfb	15	Magnetic

Add New Volume

Create a 'new security group', either create a new one or else select an existing security group and review the configuration and choose the Key Pair or Create New key Pair, select the key and click on 'Create Launch Configuration'

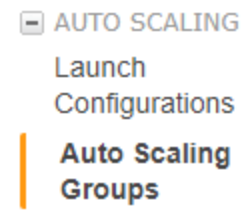




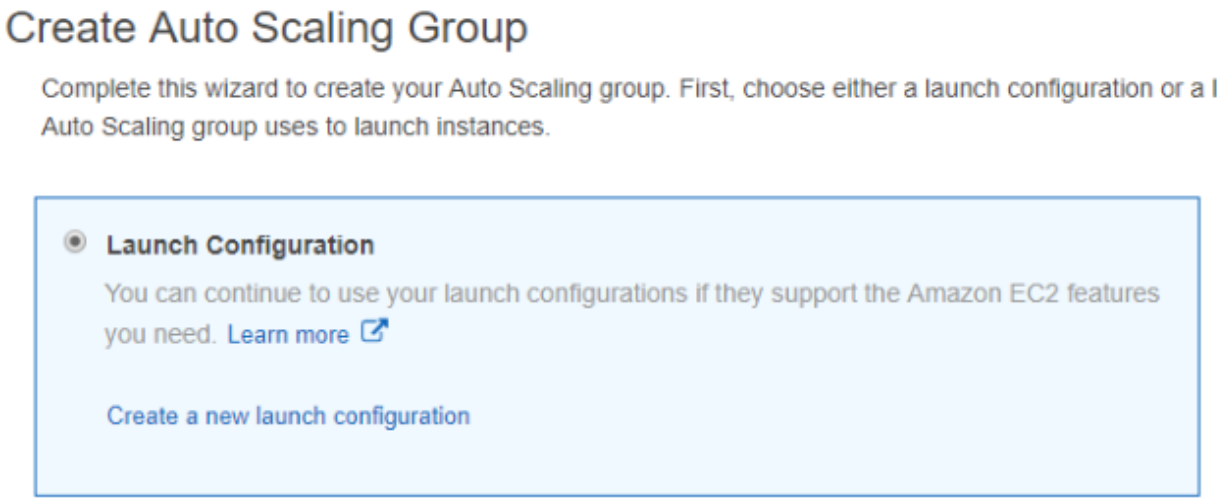


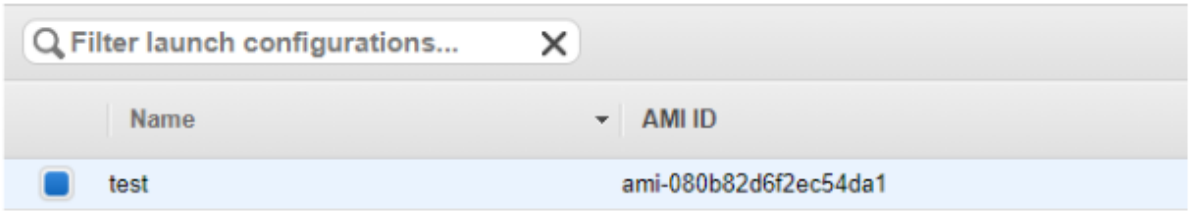
4. Create Auto Scaling Group

To create the Auto Scaling Group, go to the EC2 service and navigate to the Auto Scaling Groups,

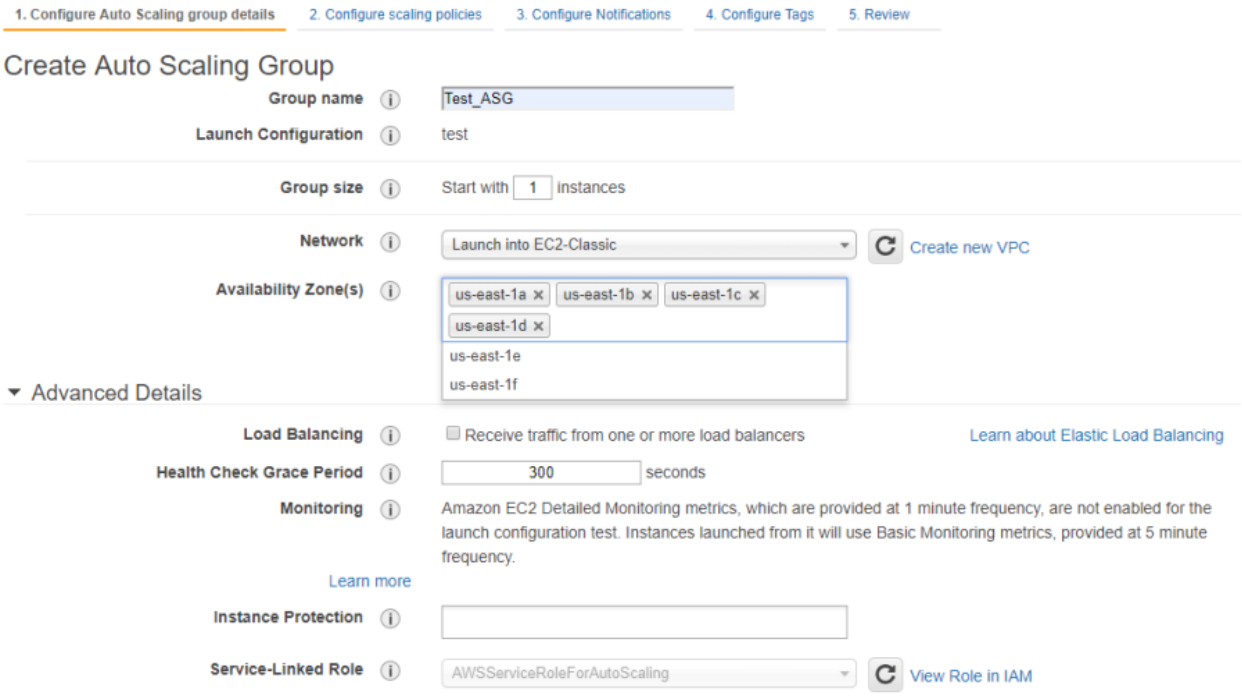


Click on 'Create Auto Scaling Group' button and choose the launch configuration, and click on the button 'Next Step'





Configure the Auto Scaling Group details



You can optionally add scaling policies if you want to adjust the size (number of instances) of your group automatically. A scaling policy is a set of instructions for making such adjustments in response to an Amazon CloudWatch alarm that you assign to it. In each policy, you can choose to add or

remove a specific number of instances or a percentage of the existing group size, or you can set the group to an exact size. When the alarm triggers, it will execute the policy and adjust the size of your group accordingly.

- (●) **Keep this group at its initial size**
- ( ) **Use scaling policies to adjust the capacity of this group**

Configure your Auto Scaling group to send notifications to a specified endpoint, such as an email address, whenever a specified event takes place, including: successful launch of an instance, failed instance launch, instance termination, and failed instance termination.
If you created a new topic, check your email for a confirmation message and click the included link to confirm your subscription. Notifications can only be sent to confirmed addresses.

In the Configure Tags screen, create the Tag & Value and Review the configurations and click on the 'Create Auto Scaling Group' button.