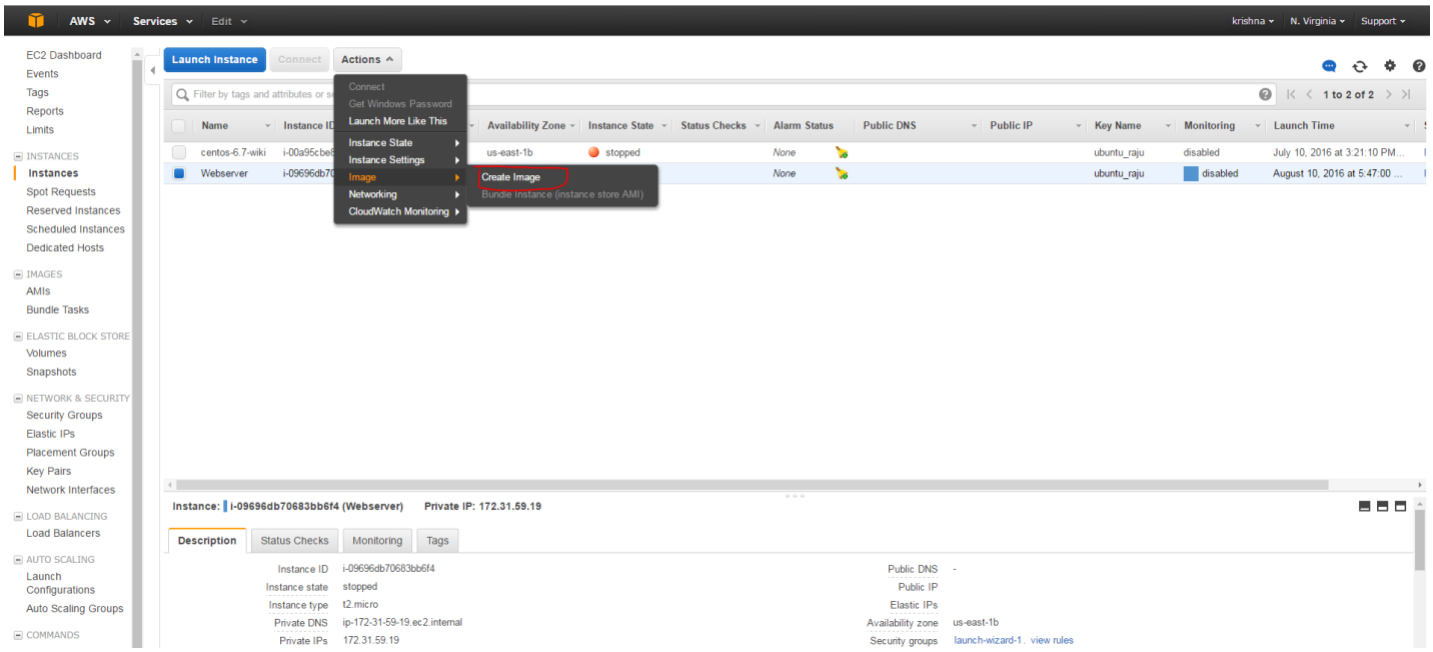
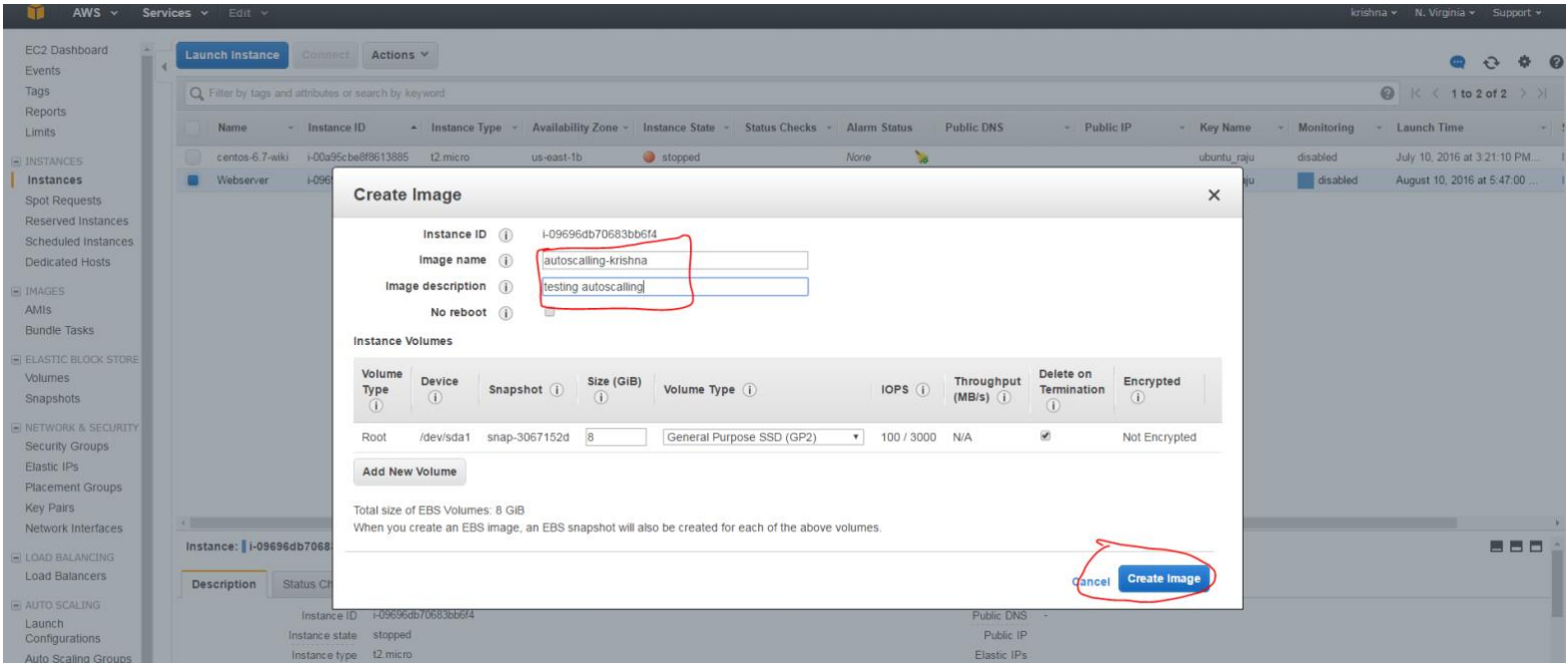
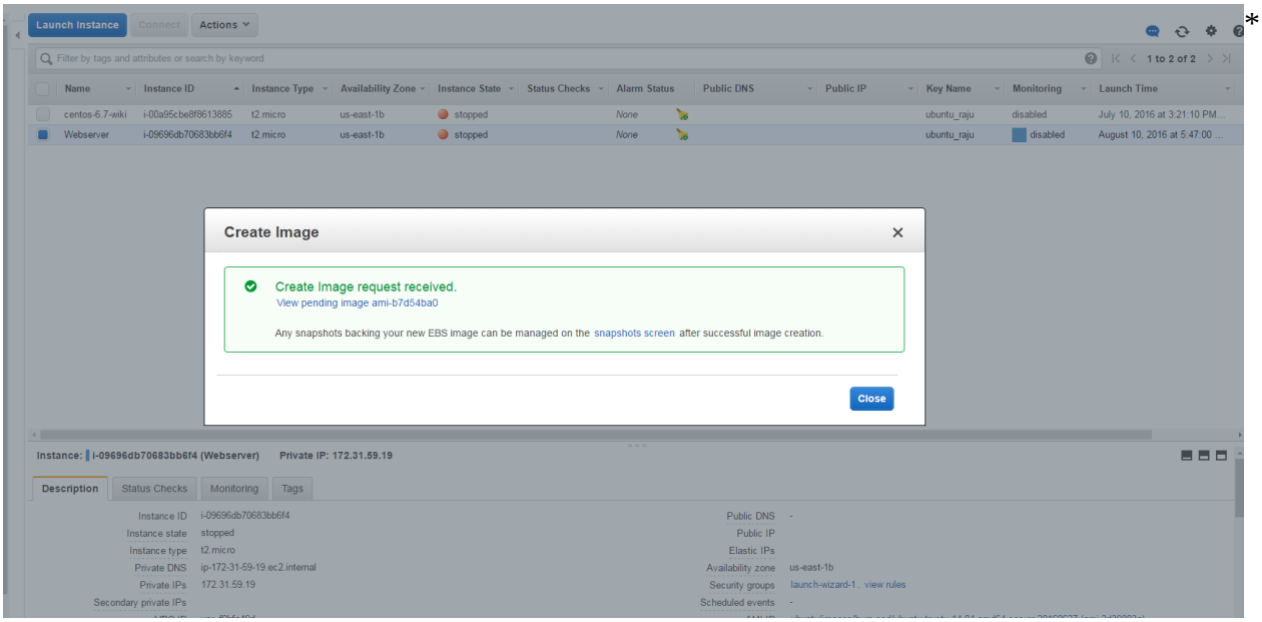
# AWS Auto Scaling for ELB

## Step 1 : Create AMI

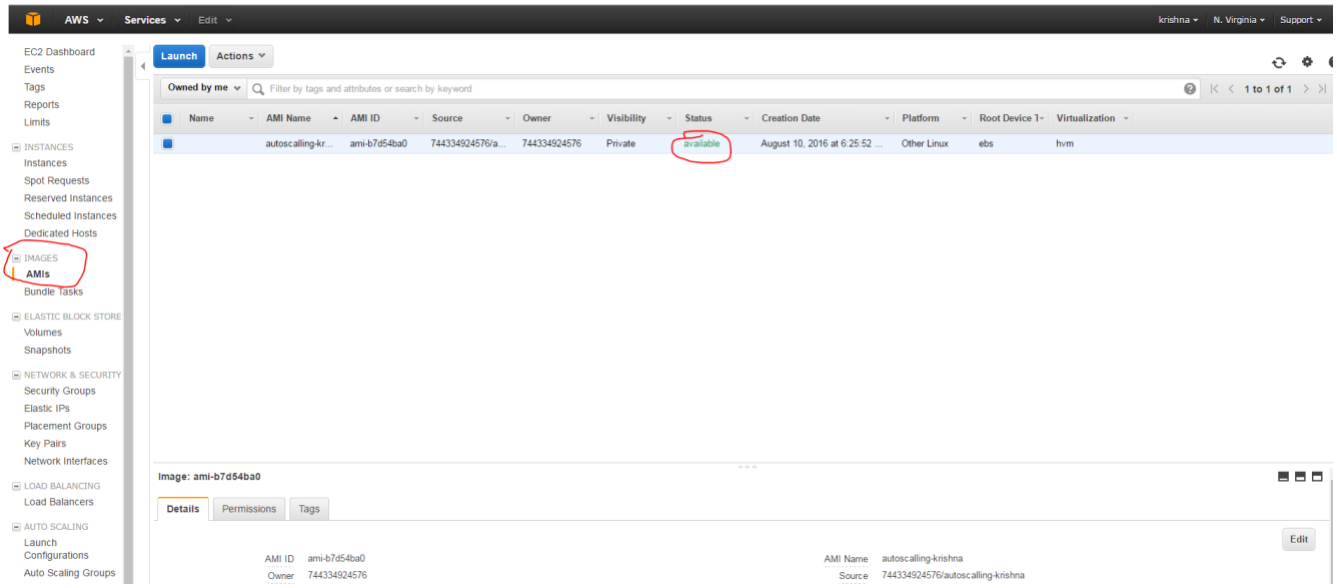


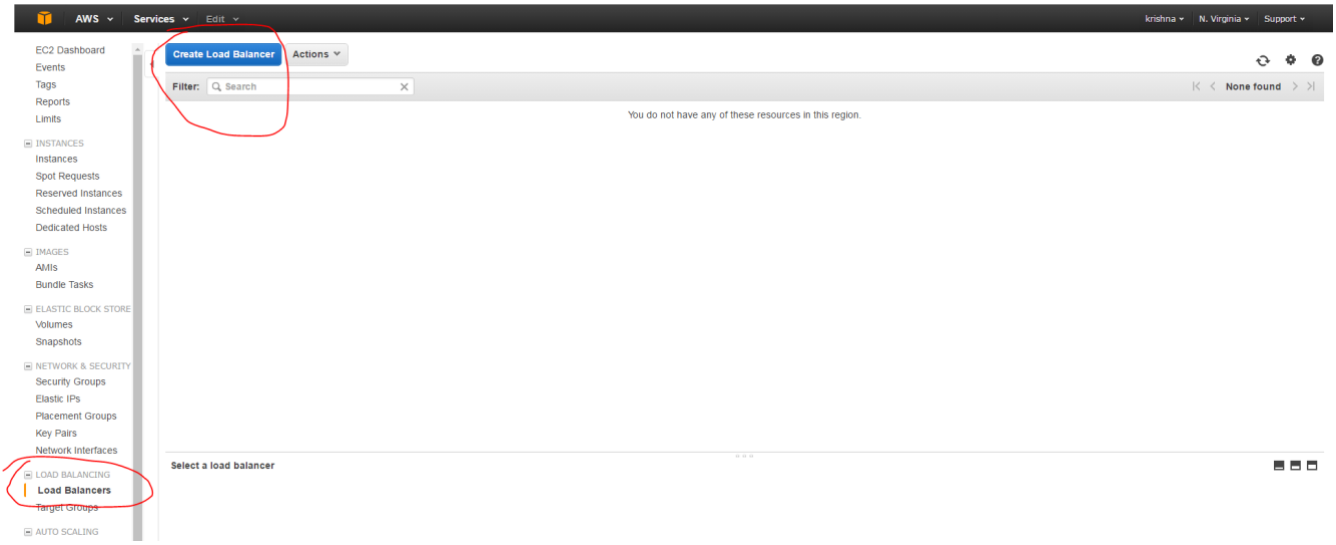


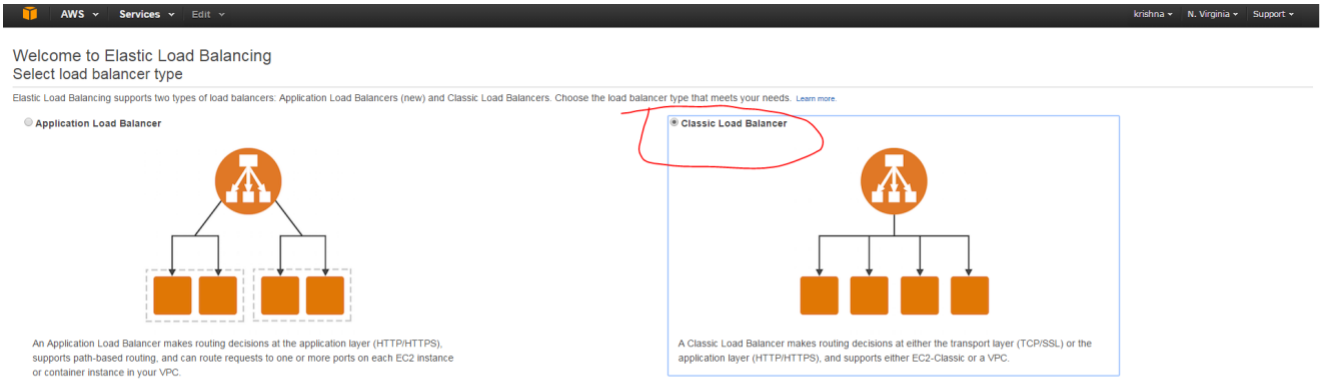

*

Check AMI status




* Create Loadbalancer


AWS
Services
Edit
krishna
N. Virginia
Support
EC2 Dashboard
Events
Tags
Reports
Limits
INSTANCES
Instances
Spot Requests
Reserved Instances
Scheduled Instances
Dedicated Hosts
IMAGES
AMIs
Bundle Tasks
ELASTIC BLOCK STORE
Volumes
Snapshots
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
LOAD BALANCING
Load Balancers
Target Groups
AUTO SCALING
Create Load Balancer
Actions
Filter:
Search
None found
You do not have any of these resources in this region.
Select a load balancer

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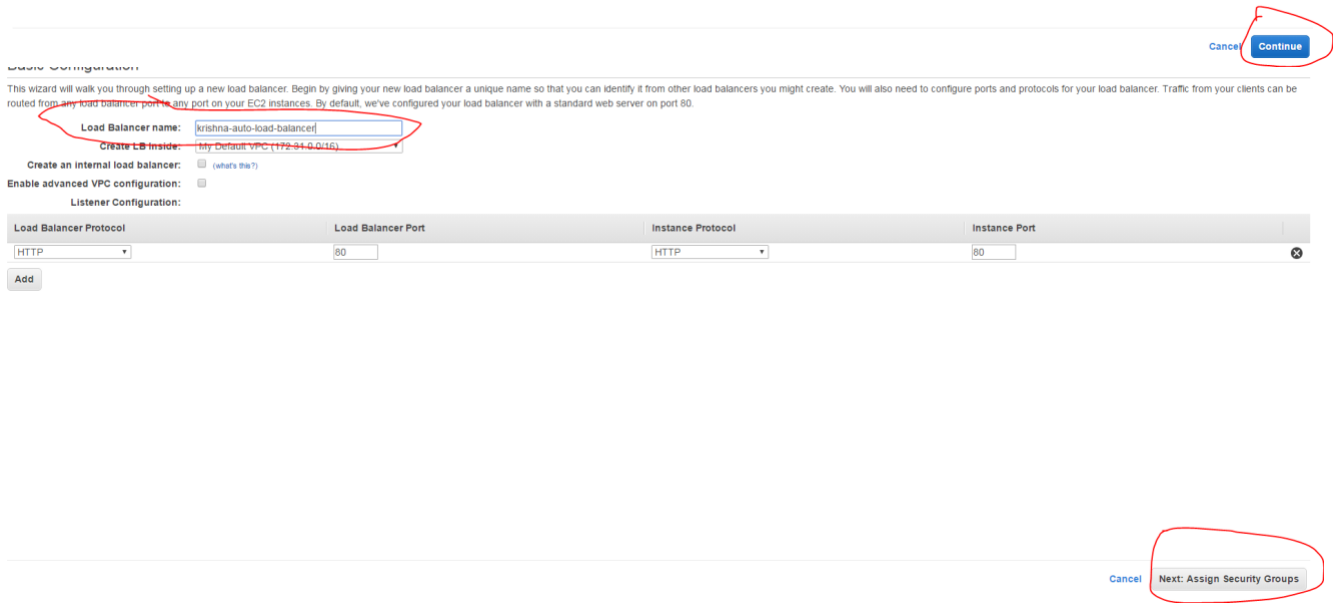
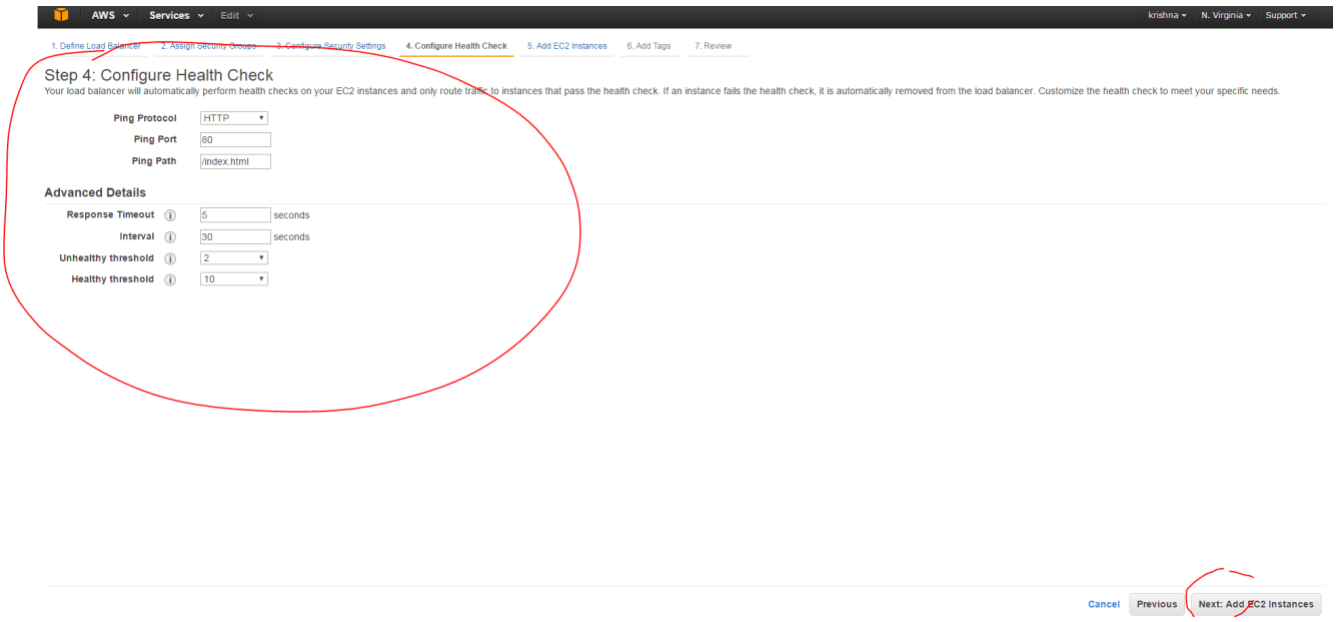
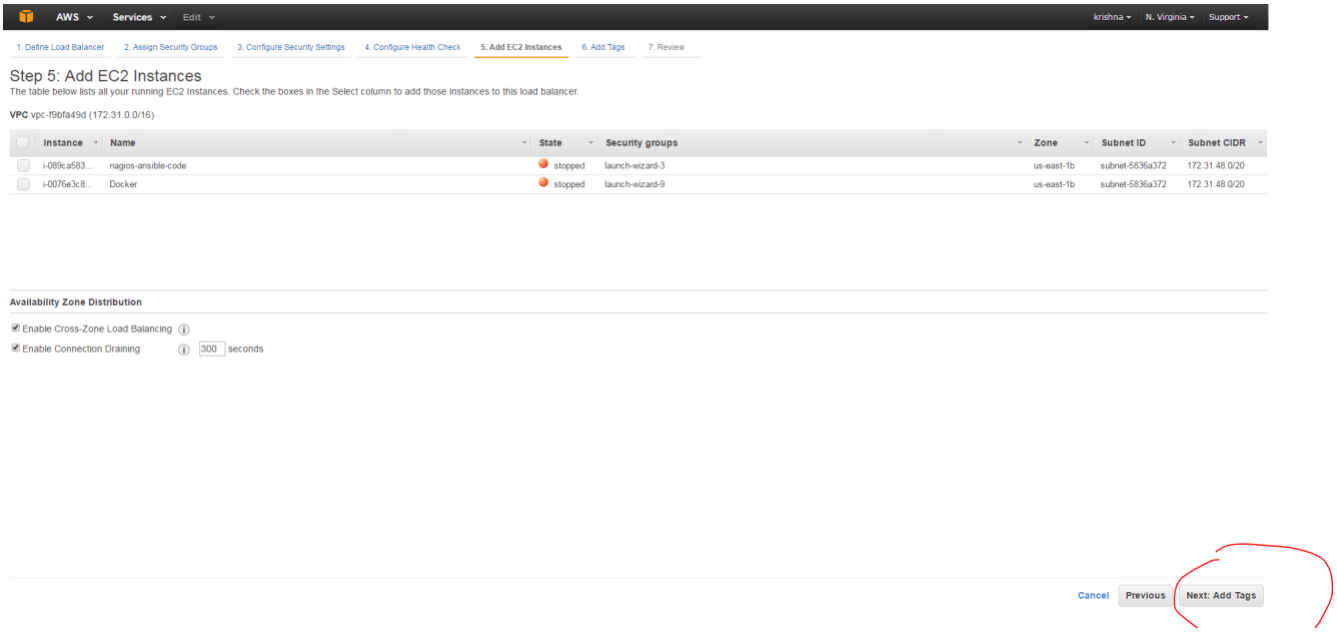


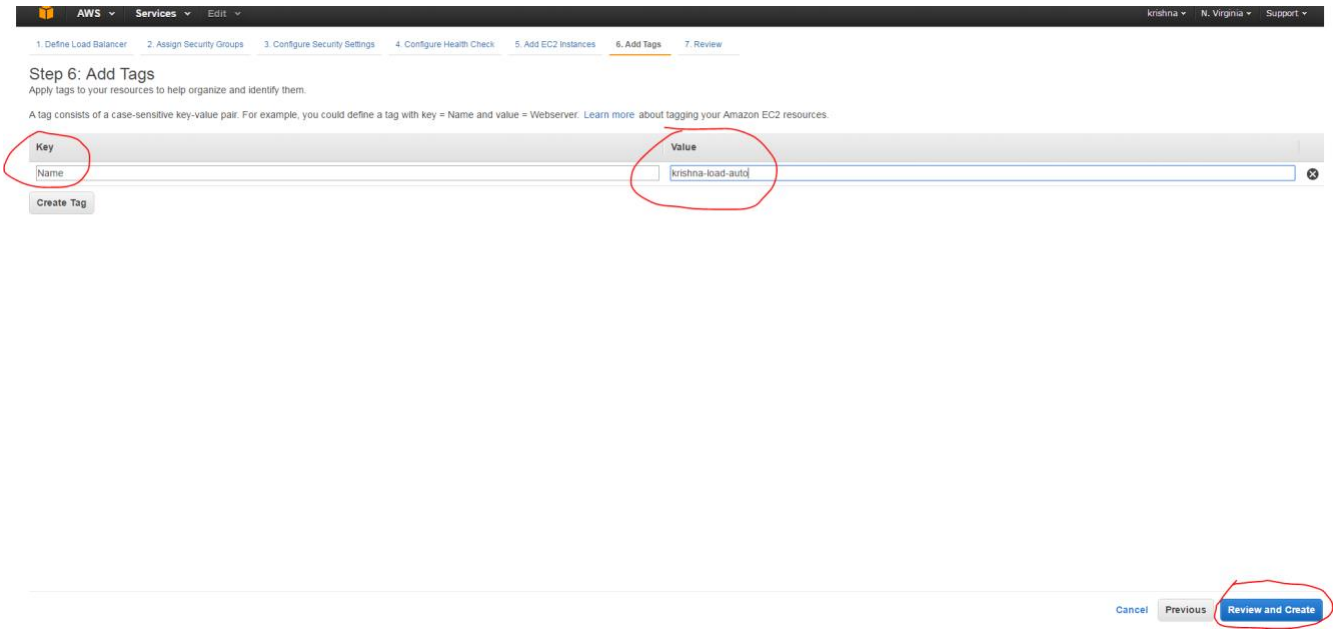

* If you have any specification change it accordingly , otherwise make it same as default



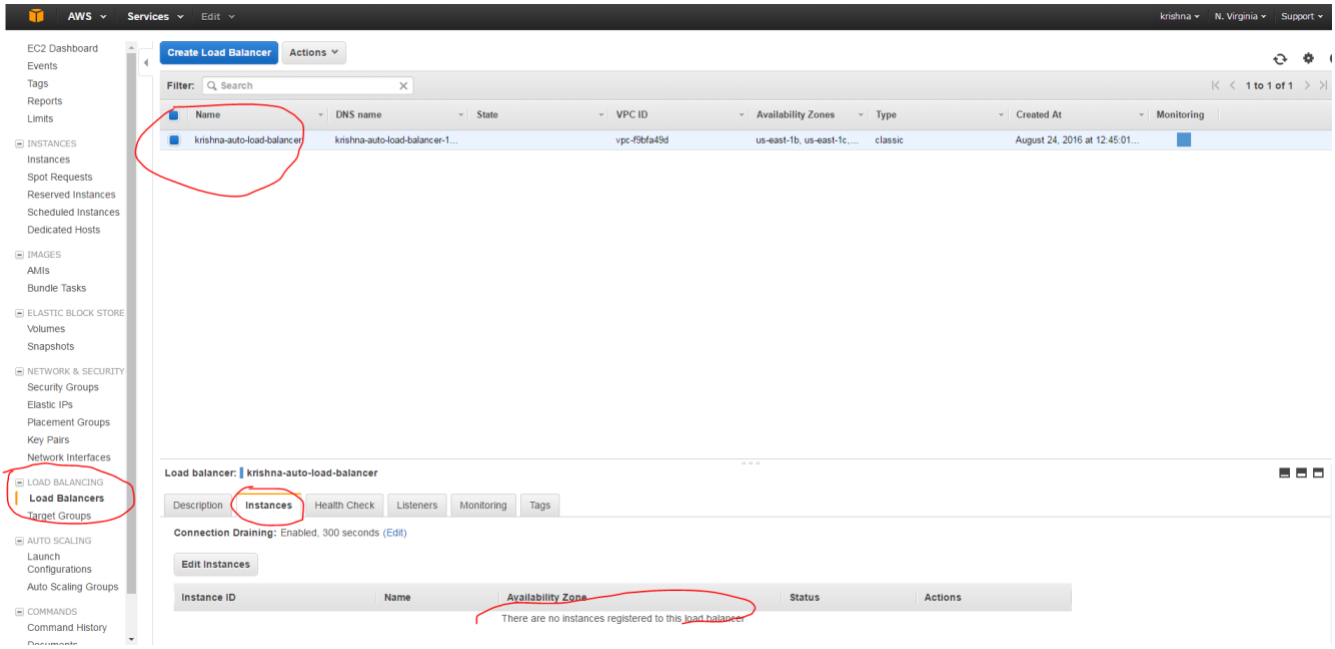

* No need to add any Instances as of now , it will add automatically once configuration done.



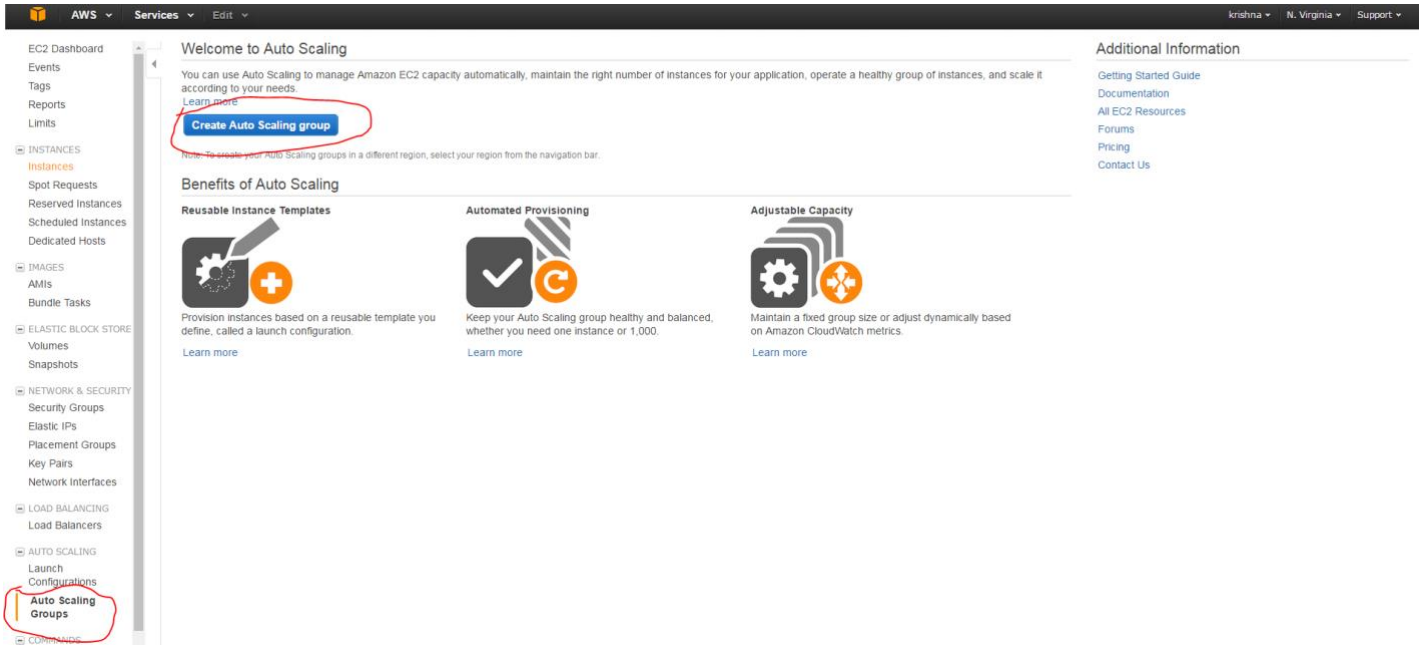

* Mentioned tag name and create a load balancer

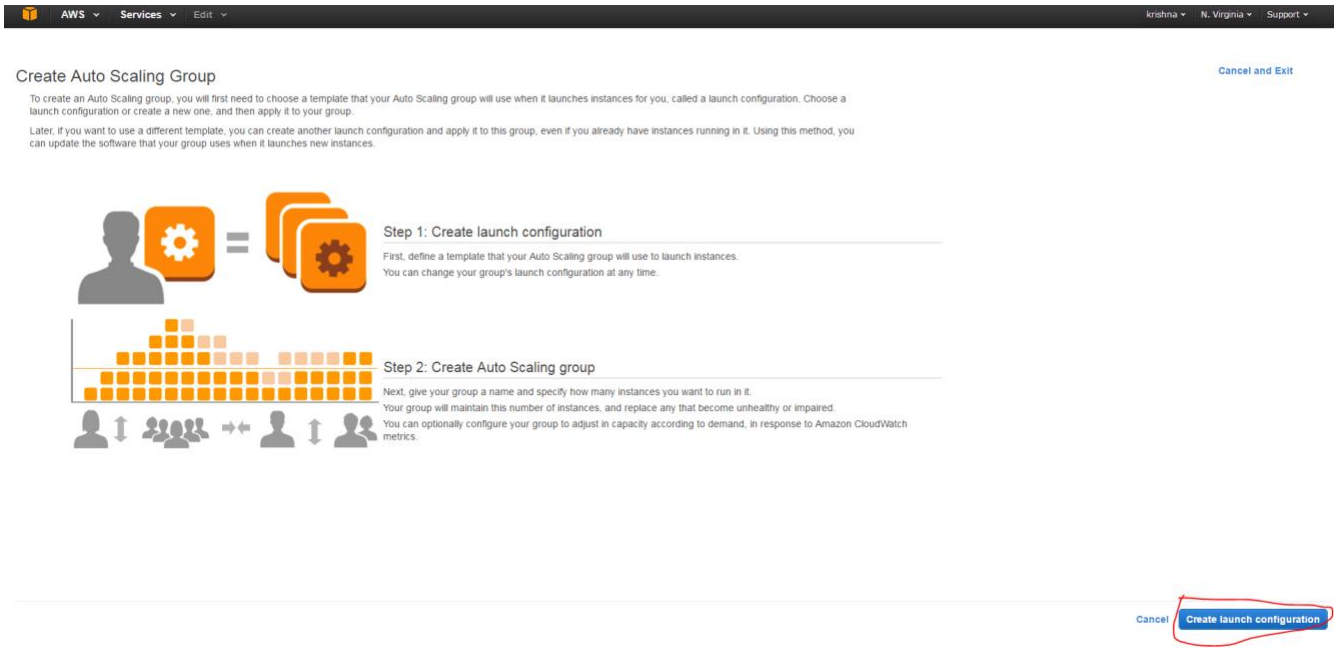



* After create a load balancer , your ELB dashboard looks like below.

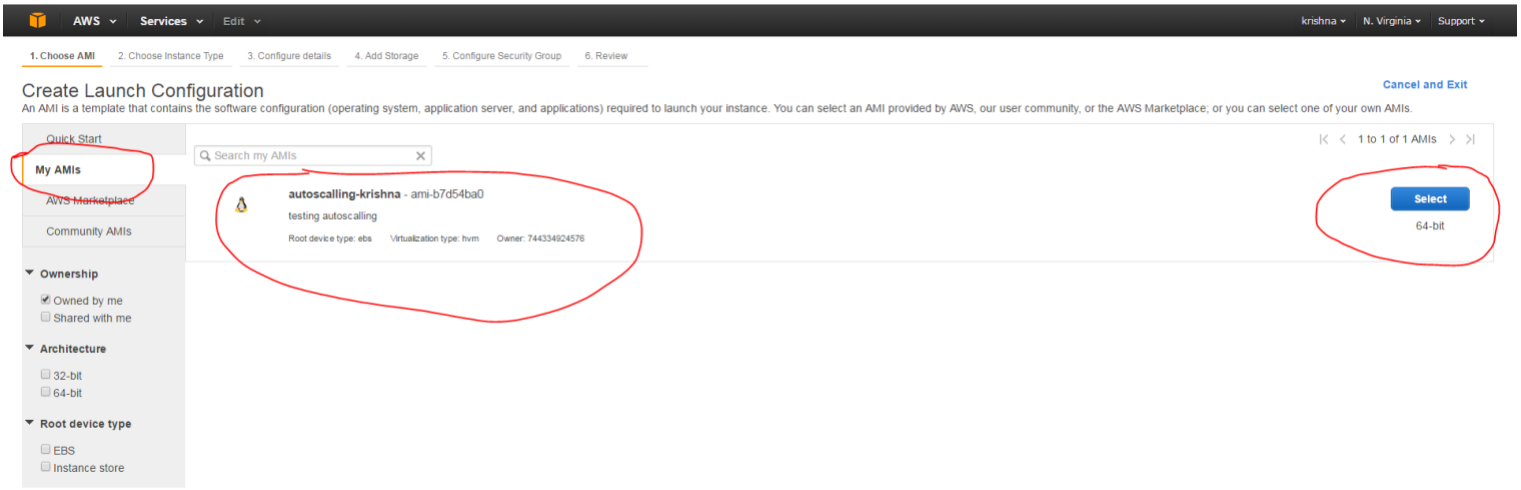


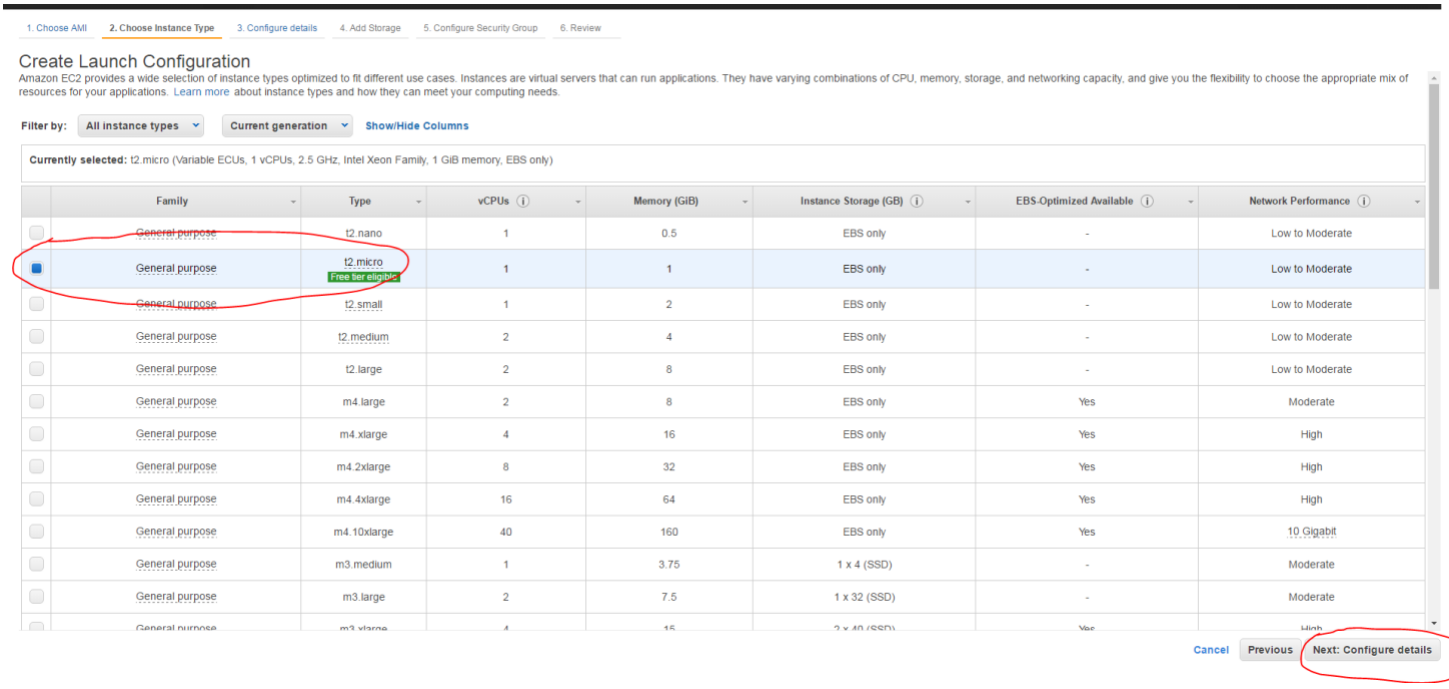
## * Create Autoscaling  group and Launch Configuration

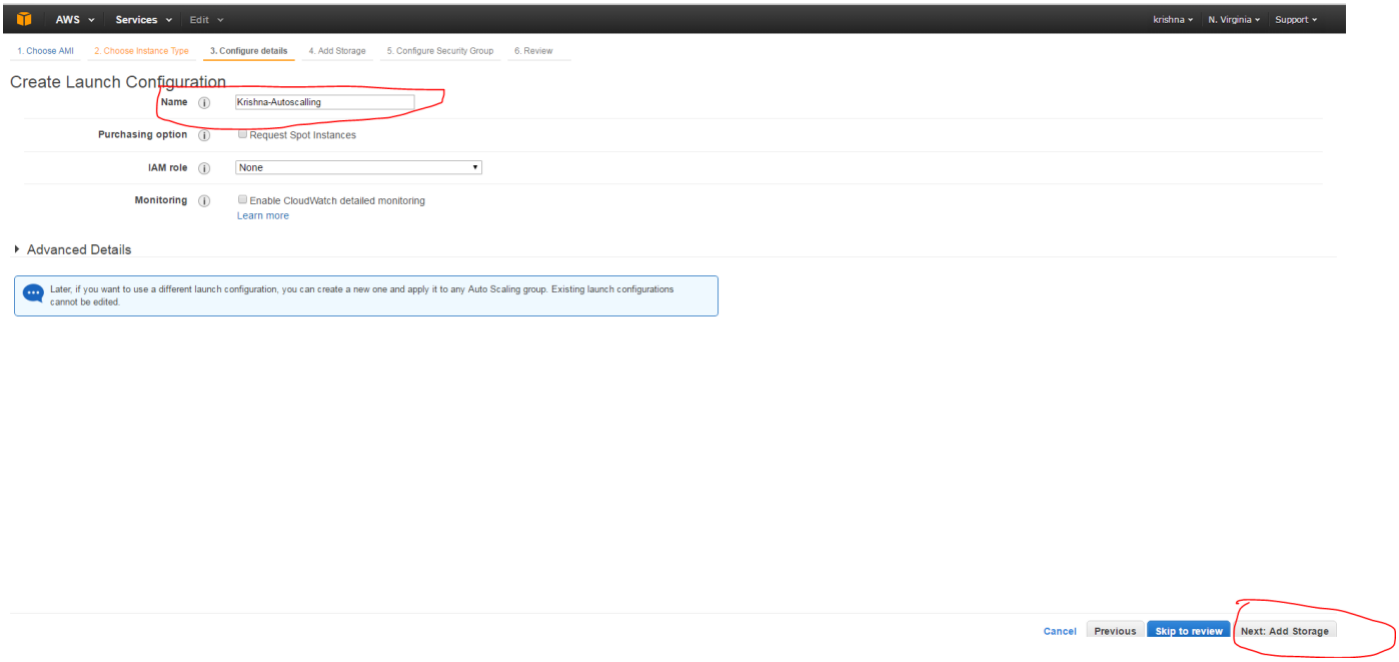


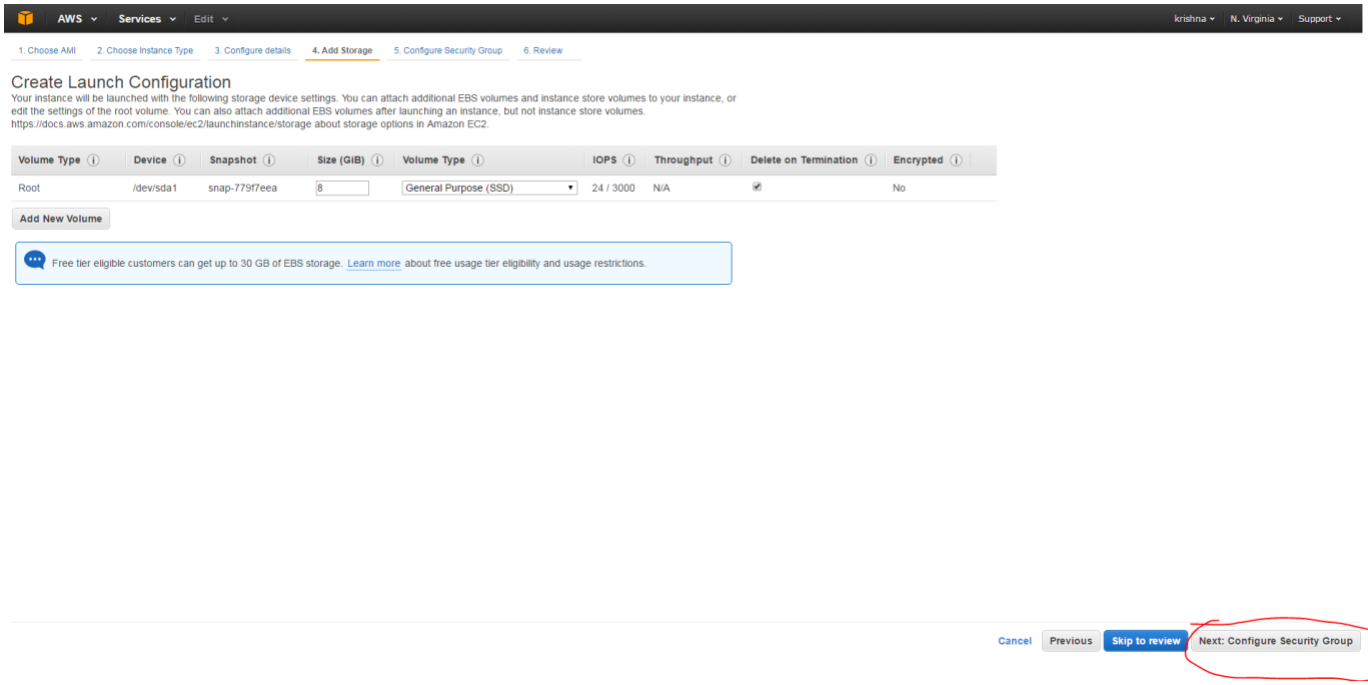



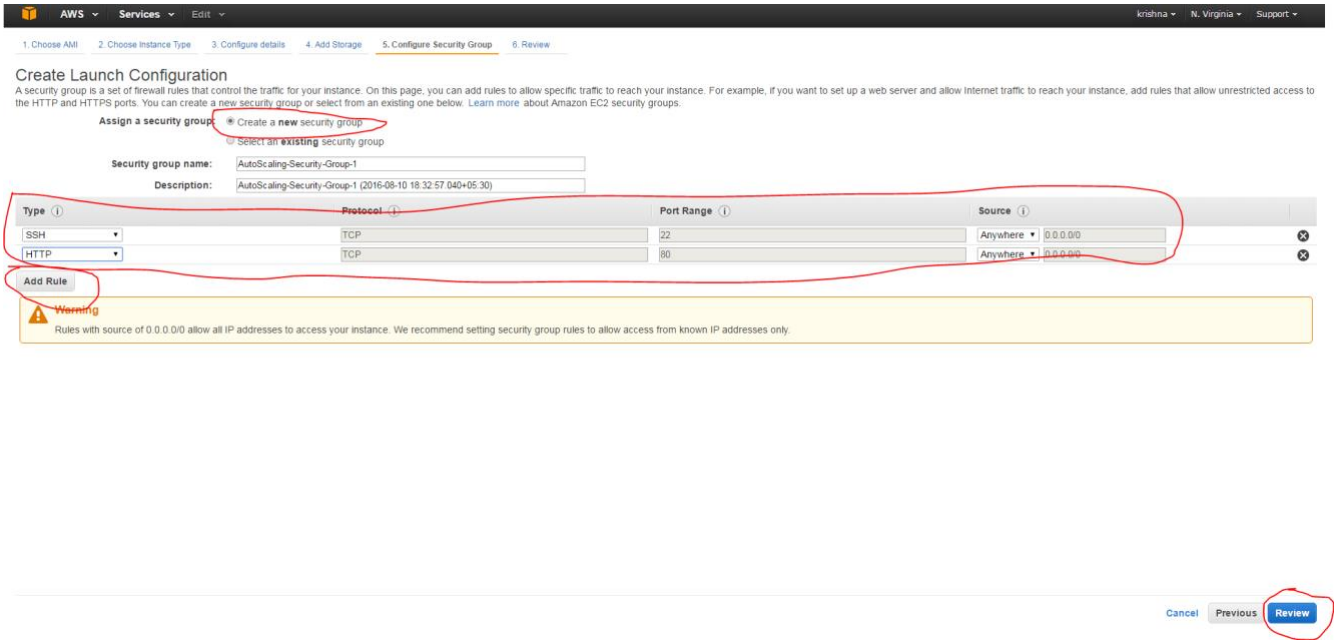
* Click on my ami **SELECT** it.

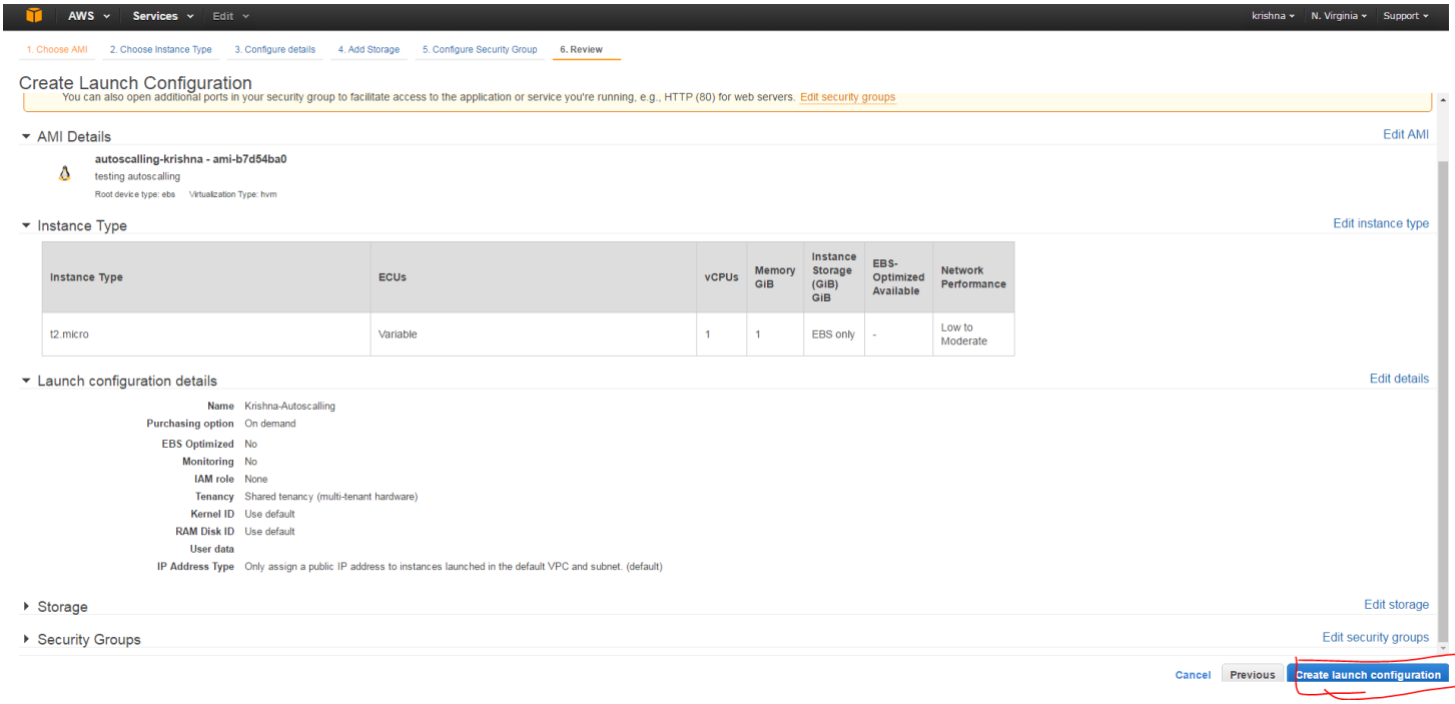


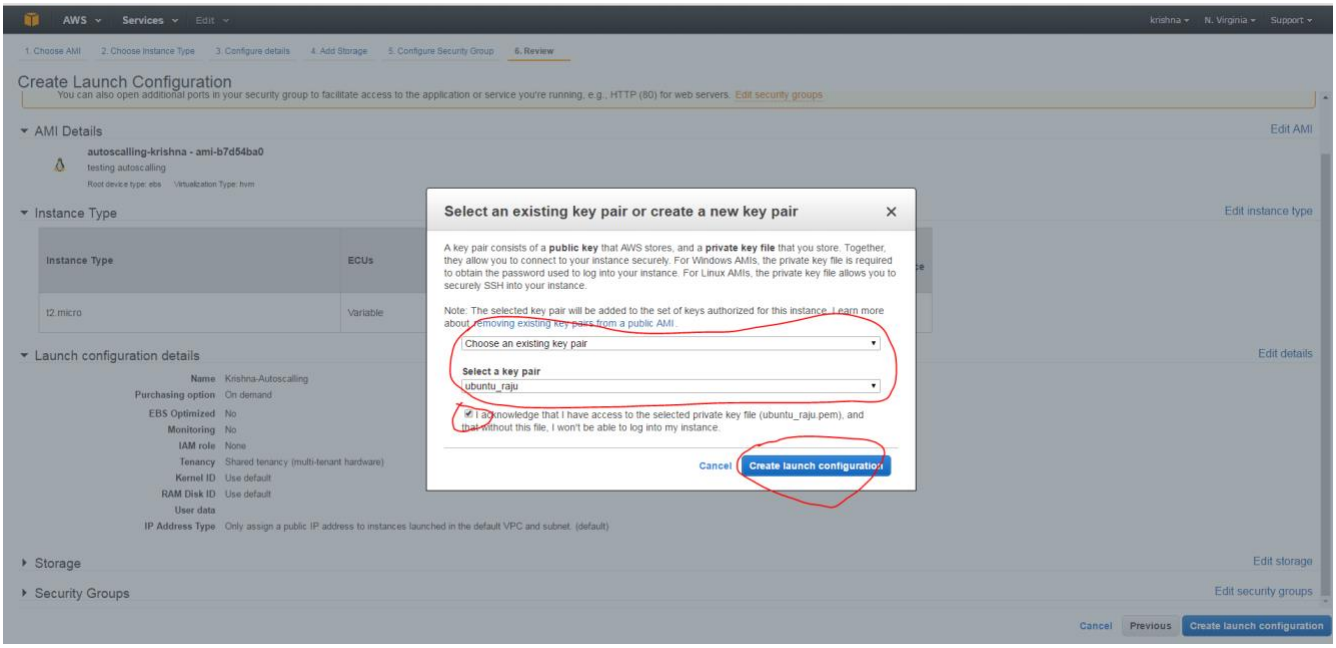




AWS
Services
Edit
krishna
N. Virginia
Support
1. Choose AMI
2. Choose Instance Type
3. Configure details
4. Add Storage
5. Configure Security Group
6. Review
Create Launch Configuration
Name
Krishna-Autoscalling
Purchasing option
Request Spot Instances
IAM role
None
Monitoring
Enable CloudWatch detailed monitoring
Learn more
Advanced Details
Later, if you want to use a different launch configuration, you can create a new one and apply it to any Auto Scaling group. Existing launch configurations cannot be edited.
Cancel
Previous
Skip to review
Next: Add Storage


AWS
Services
Edit
krishna
N. Virginia
Support
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 volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes.
https://docs.aws.amazon.com/console/ec2/launchinstance/storage about storage options in Amazon EC2.
Volume Type
Device
Snapshot
Size (GiB)
Volume Type
IOPS
Throughput
Delete on Termination
Encrypted
Root
/dev/sda1
snap-779f7eea
8
General Purpose (SSD)
24 / 3000
N/A
No
Add New Volume
Free tier eligible customers can get up to 30 GB of EBS storage. Learn more about free usage tier eligibility and usage restrictions.
Cancel
Previous
Skip to review
Next: Configure Security Group

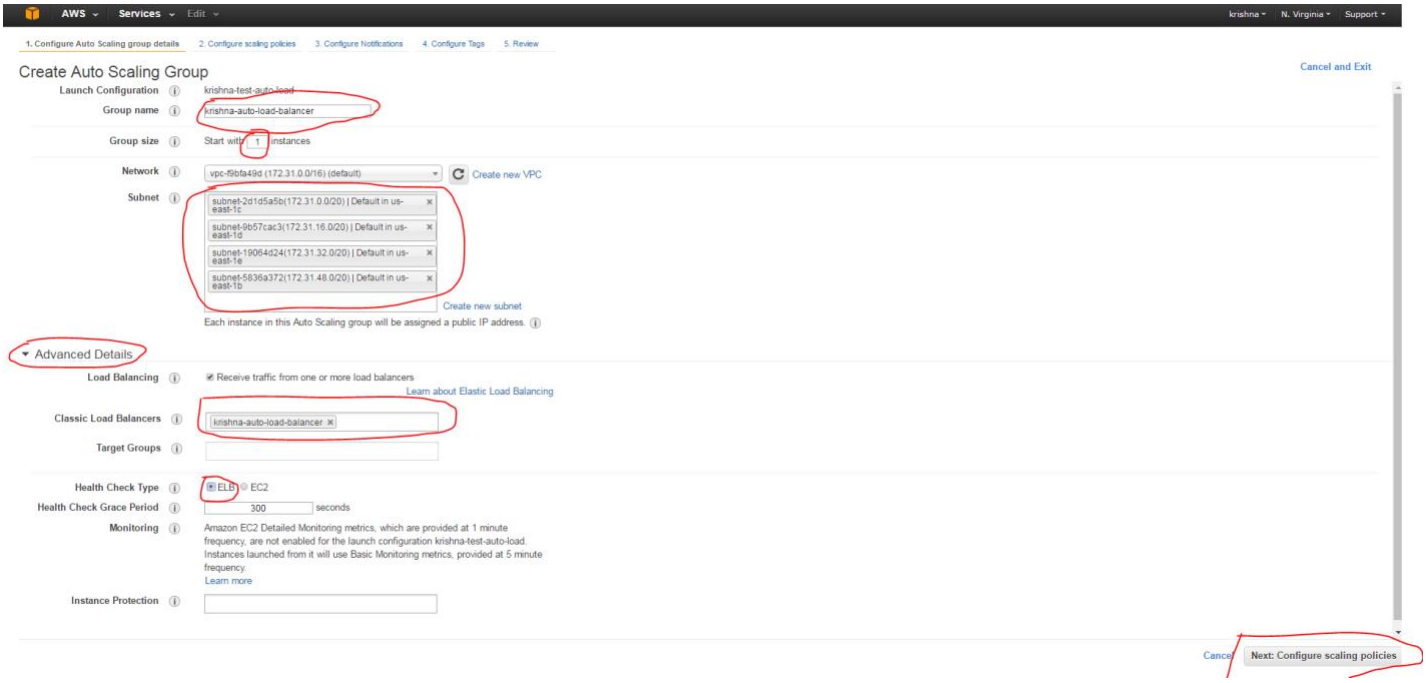

AWS
Services
Edit
krishna
N. Virginia
Support
1. Choose AMI
2. Choose Instance Type
3. Configure details
4. Add Storage
5. Configure Security Group
6. Review
Create Launch Configuration
A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. Learn more about Amazon EC2 security groups.
Assign a security group:
Create a new security group
Select an existing security group
Security group name:
AutoScaling-Security-Group-1
Description:
AutoScaling-Security-Group-1 (2016-08-10 18:32:57.040+05:30)
Type
Protocol
Port Range
Source
SSH
TCP
22
Anywhere
0.0.0.0/0
HTTP
TCP
80
Anywhere
0.0.0.0/0
Add Rule
Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.
Cancel
Previous
Review


AWS
Services
Edit
krishna
N. Virginia
Support
1. Choose AMI
2. Choose Instance Type
3. Configure details
4. Add Storage
5. Configure Security Group
6. Review
Create Launch Configuration
You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. Edit security groups
AMI Details
Edit AMI
autoscalling-krishna - ami-b7d54ba0
testing autoscalling
Root device type: ebs Virtualization type: hvm
Instance Type
Edit instance type
Instance Type
ECUs
vCPUs
Memory GiB
Instance Storage (GiB) GiB
EBS-Optimized Available
Network Performance
t2.micro
Variable
1
1
EBS only
-
Low to Moderate
Launch configuration details
Edit details
Name Krishna-Autoscalling
Purchasing option On demand
EBS Optimized No
Monitoring No
IAM role None
Tenancy Shared tenancy (multi-tenant hardware)
Kernel ID Use default
RAM Disk ID Use default
User data
IP Address Type Only assign a public IP address to instances launched in the default VPC and subnet. (default)
Storage
Edit storage
Security Groups
Edit security groups
Cancel
Previous
Create launch configuration

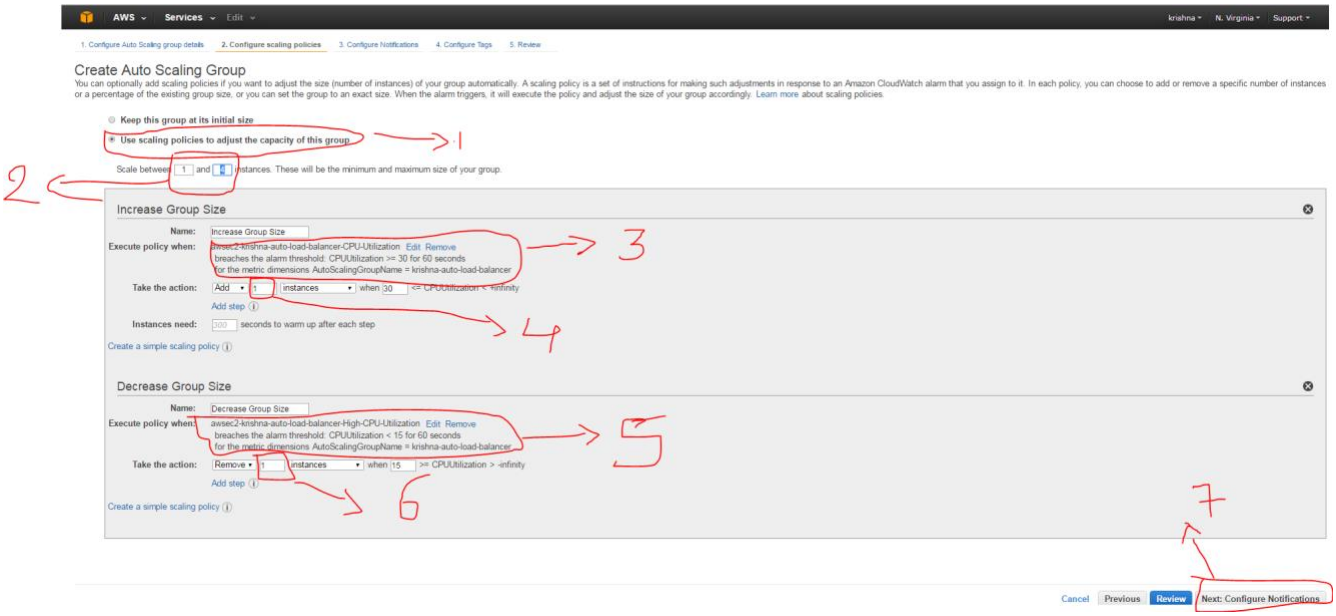



* Now create Auto Scaling Group

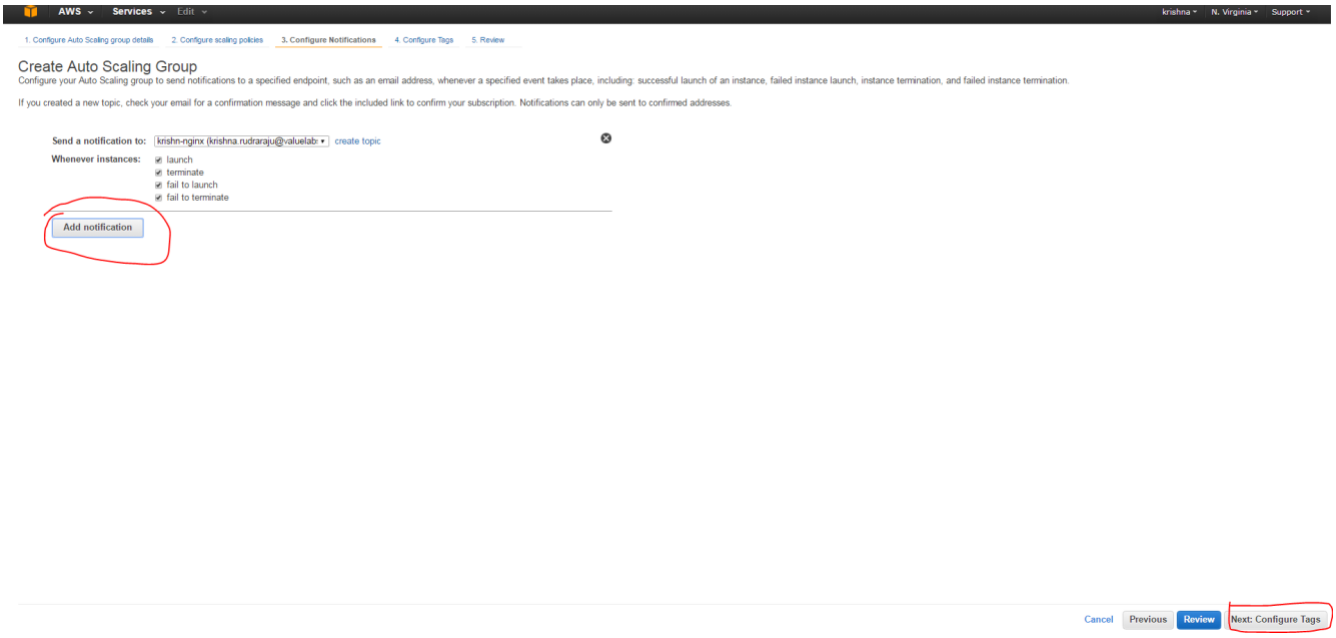
- Enter the auto scaling group name
- Enter Group size as 1 ( It will launch one instance first, later it will add based on scalling)
- Select default Network
- Select all subnets for high availability
- Click on Advanced Details
- Click on Loadbalancer check box(Receive traffic from one or more load balancers)
- Click on **Classic Load Balancers** (automatically detect our ELB)
- Then click on '**Health Check Type** ' as ELB
- Then press Configure Secure policy.



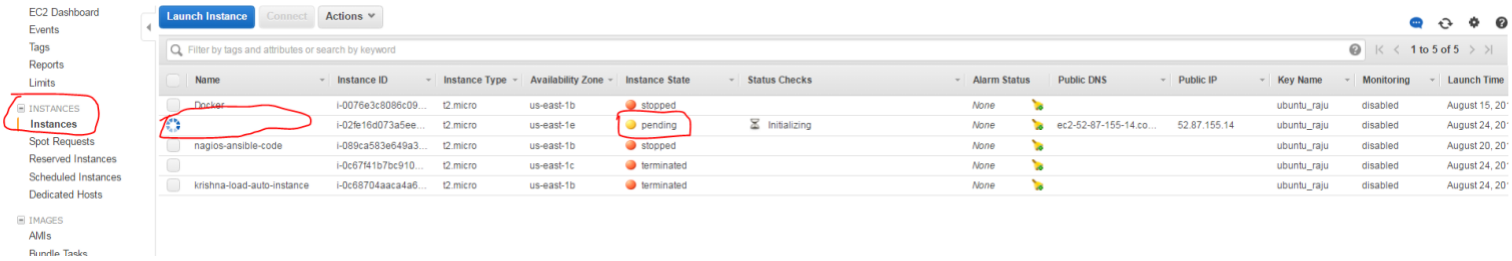

- Select the "**Use scaling policies to adjust the capacity of this group** "
- Select between 1 and 4 ( so minimum 1 instance maximum 4 instances will launch)
- Create a policy for "**Execute policy when** " ( Now I create policy when the cpu usage reached morethan or equal to 30 % in 1 minutes then add one instance).
- In **Take the action** field , mentioned 1 ( when ever above policy or alerm reached it will add one instances , if you need to add two instances when the policy or alerm reached thresold mentioned 2.
- Like in the same way create policy for Decrese group size also.



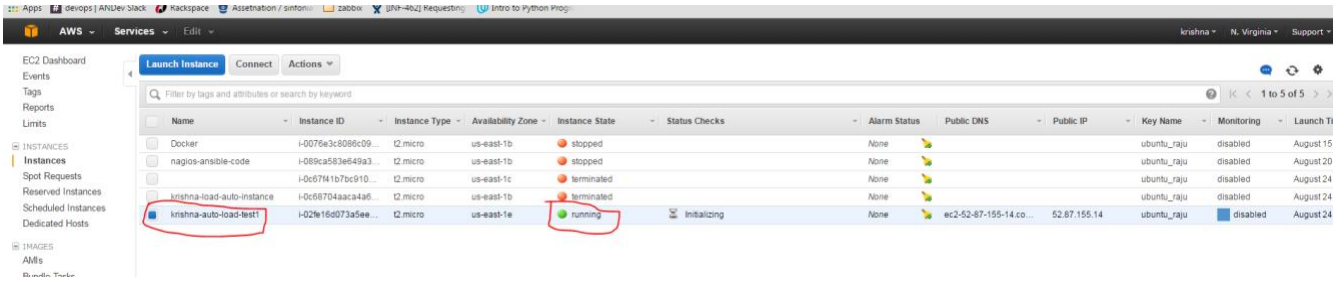
* Click on “**Add notification** “ option ans add it  and create a tag for it then create

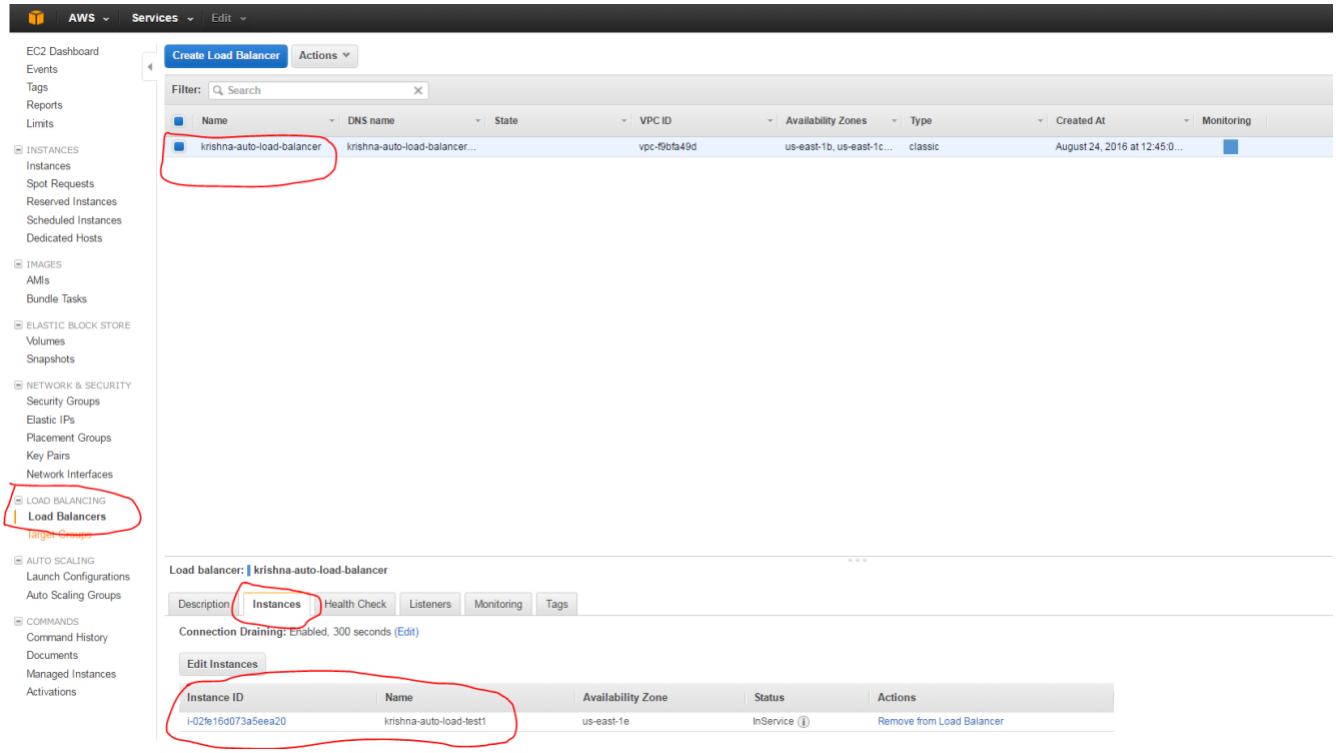



* Once you launched auto scalling group , Click on Instances , New instance will create




* Once it is running then click on Load balancer , it will automatically add this instance to ELB.

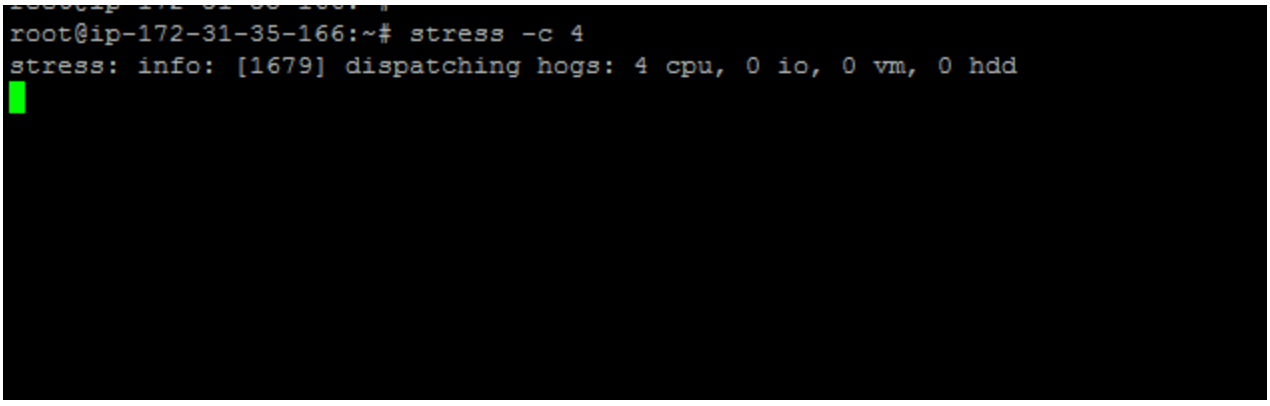





**Testing :**

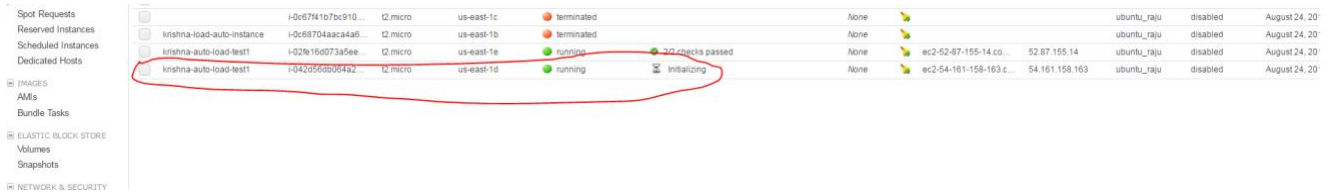
* For testing purpose , I will login to this server and increase the cpu load , so based on our scenario , if cpu load increse to more than 30 % ,it will add instance as well as it will attach new instance to ELB.

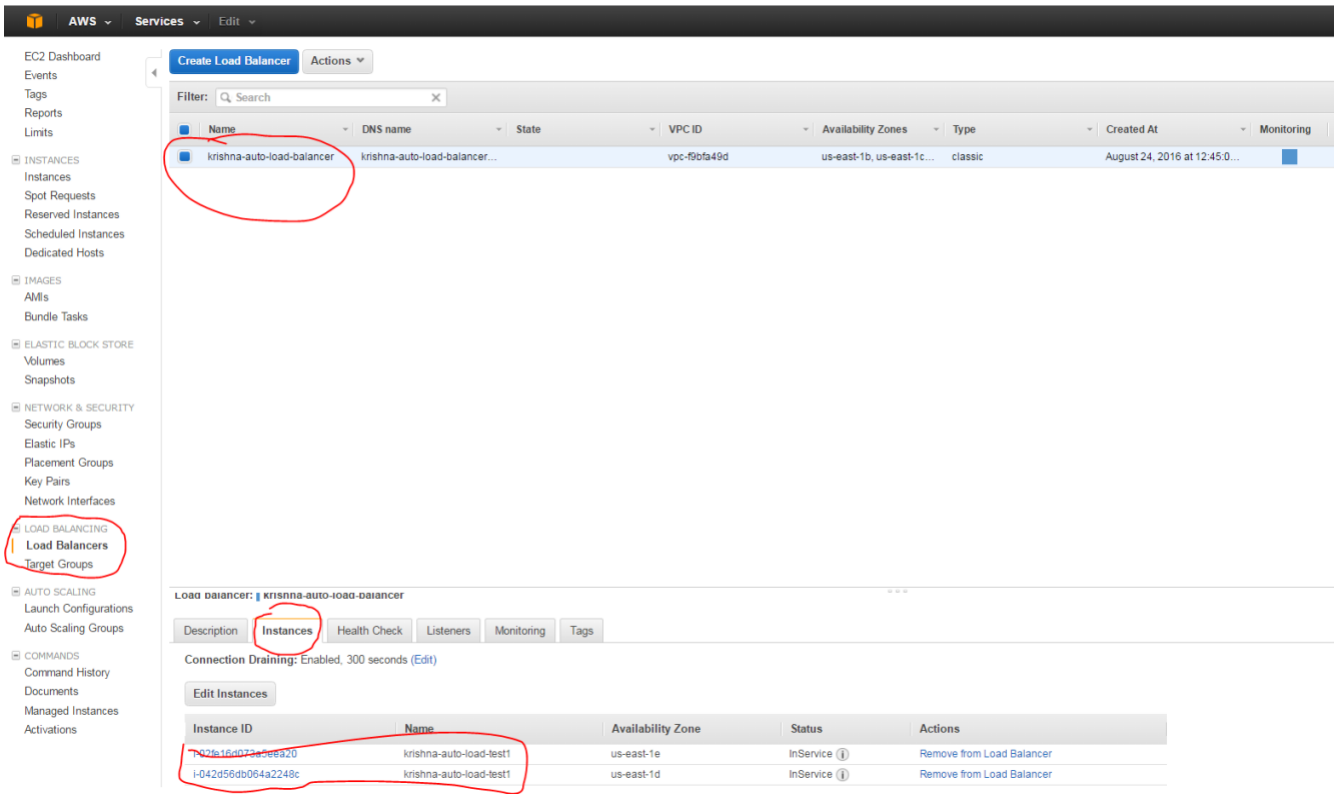
* Login to server and executed command



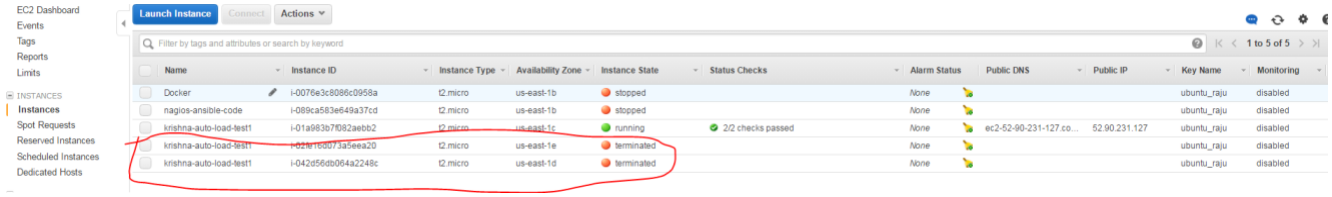

* Let's wait for 10 minutes

* After few minutes , Instances dashboard shows like this , it will automatically adding instance because we increase CPU load intensinally , based on our autoscalling policy , it will add new instance and attach to ELB. Like in the same way , it will add instance upto 4 , because we mentioned max 4 instances in autoscalling group configuration.




* Now stop the script so that CPU load comes back to normal , so based our scenario , Autoscalling group will automatically removes the instances from ELB and terminate it.



* From ELB also it will remove automatically.