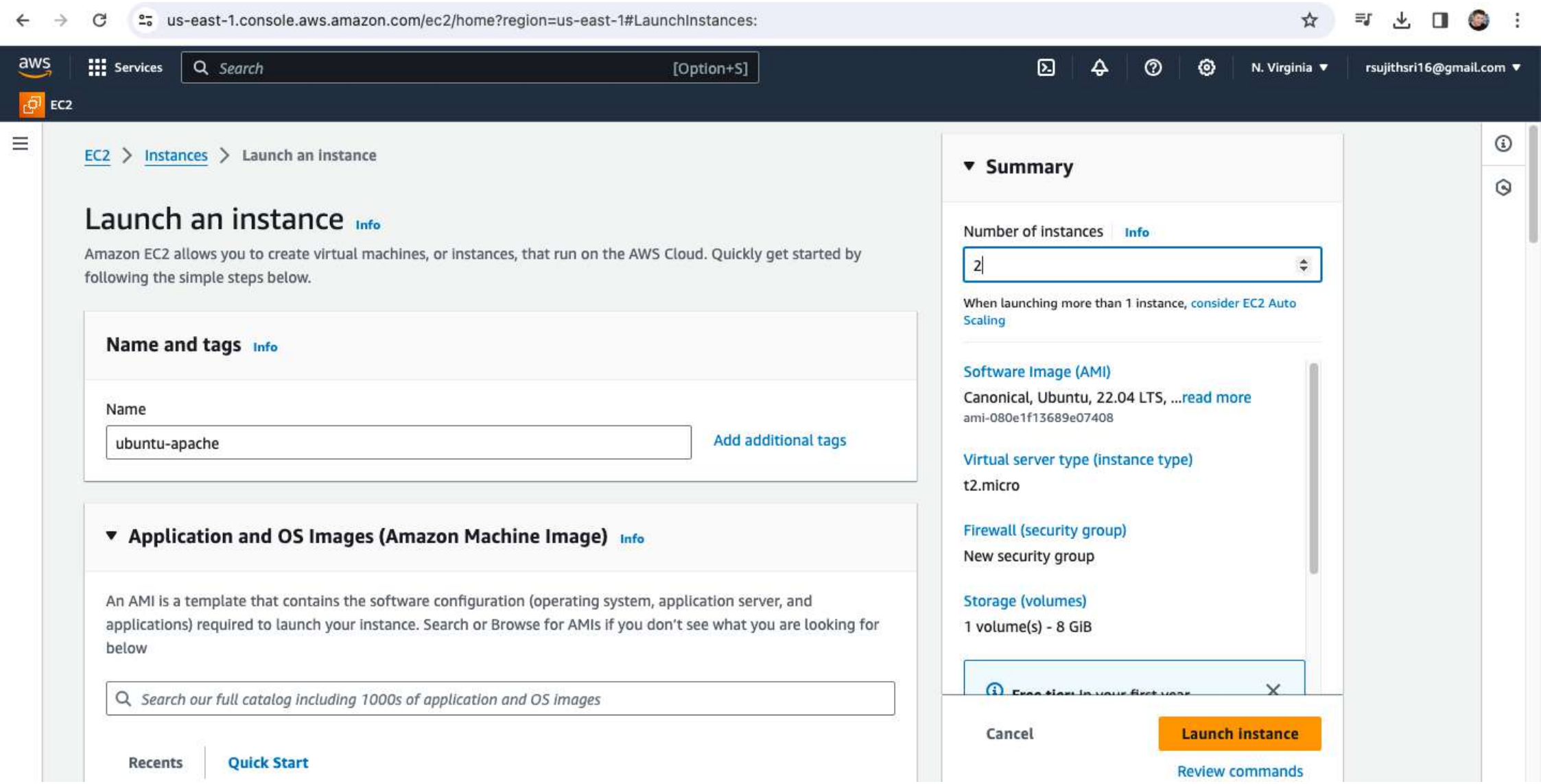
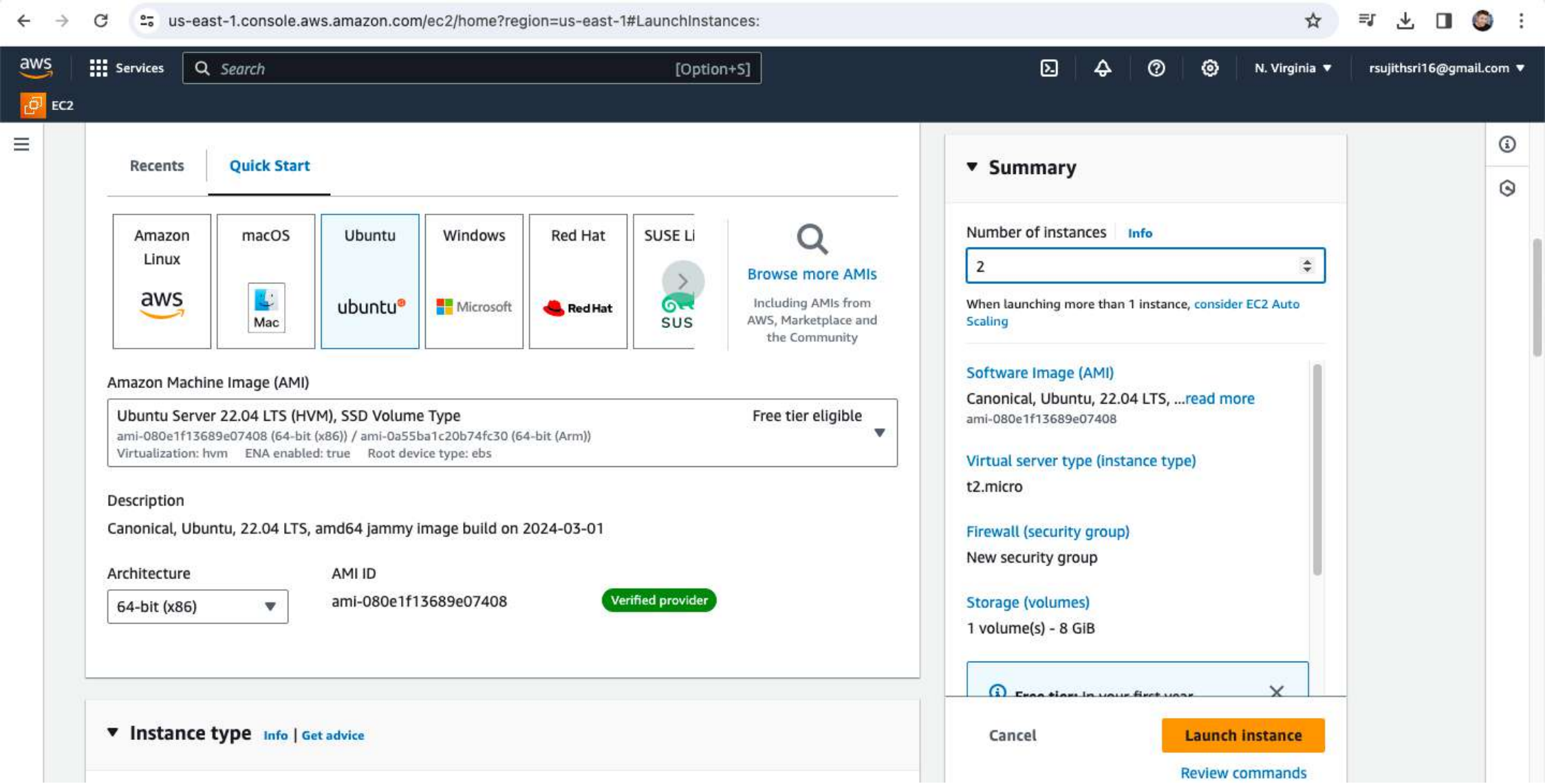
Problem Statement:

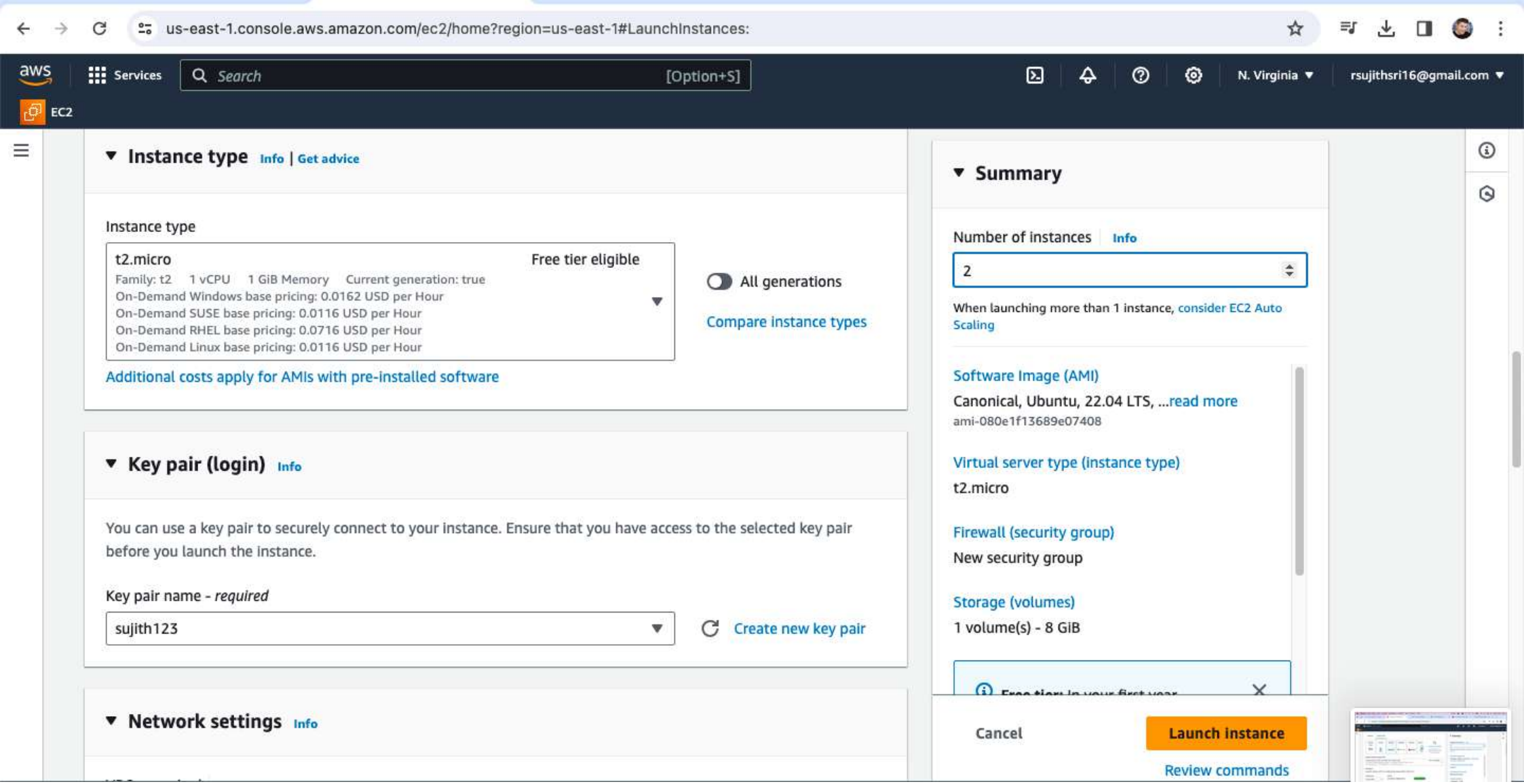
You work for XYZ Corporation that uses on premise solutions and some limited number of systems. With the increase in requests in their application, the load also increases. So, to handle the load the corporation has to buy more systems almost on a regular basis. Realizing the need to cut down the expenses on systems, they decided to move their infrastructure to AWS.

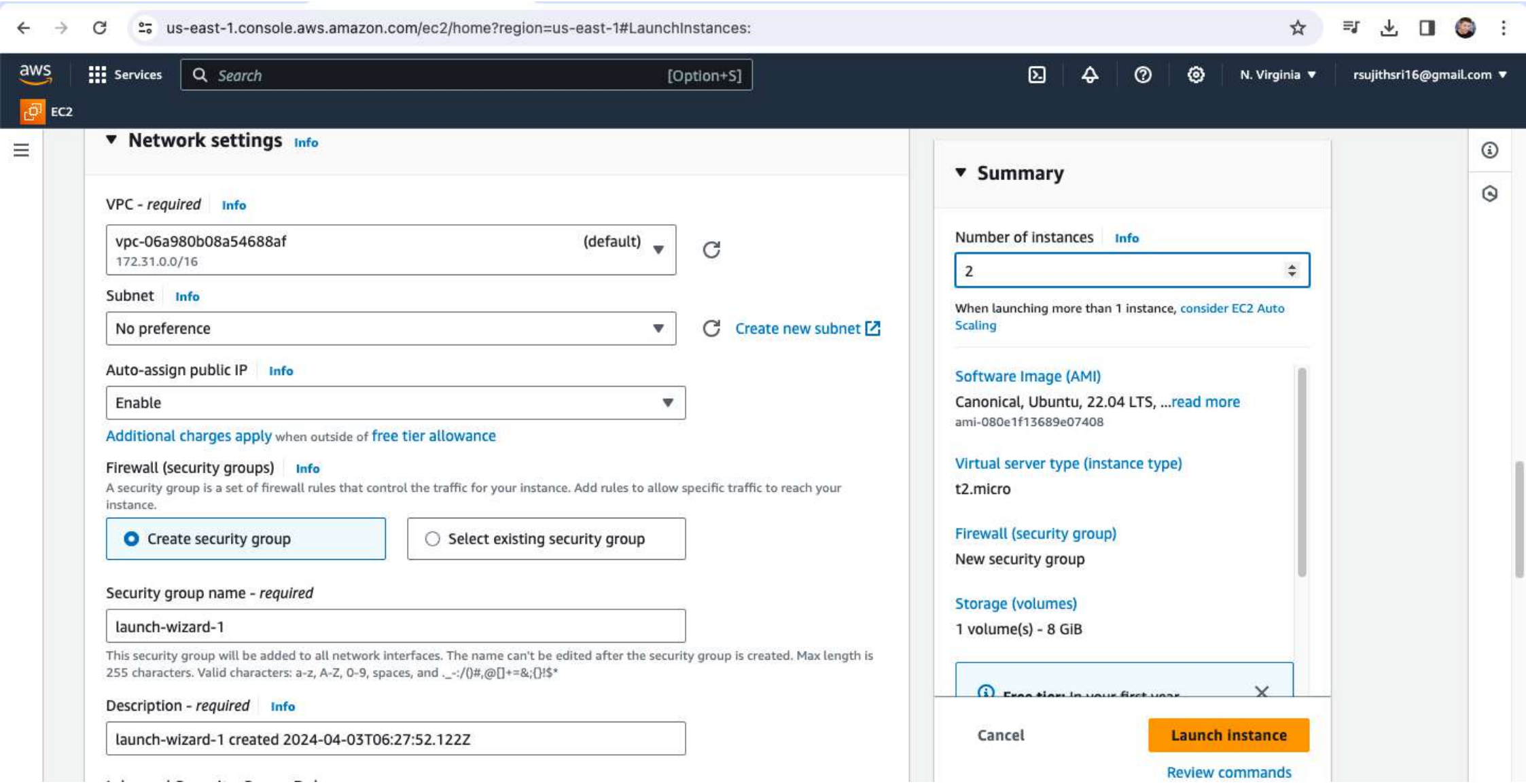
Tasks To Be Performed:

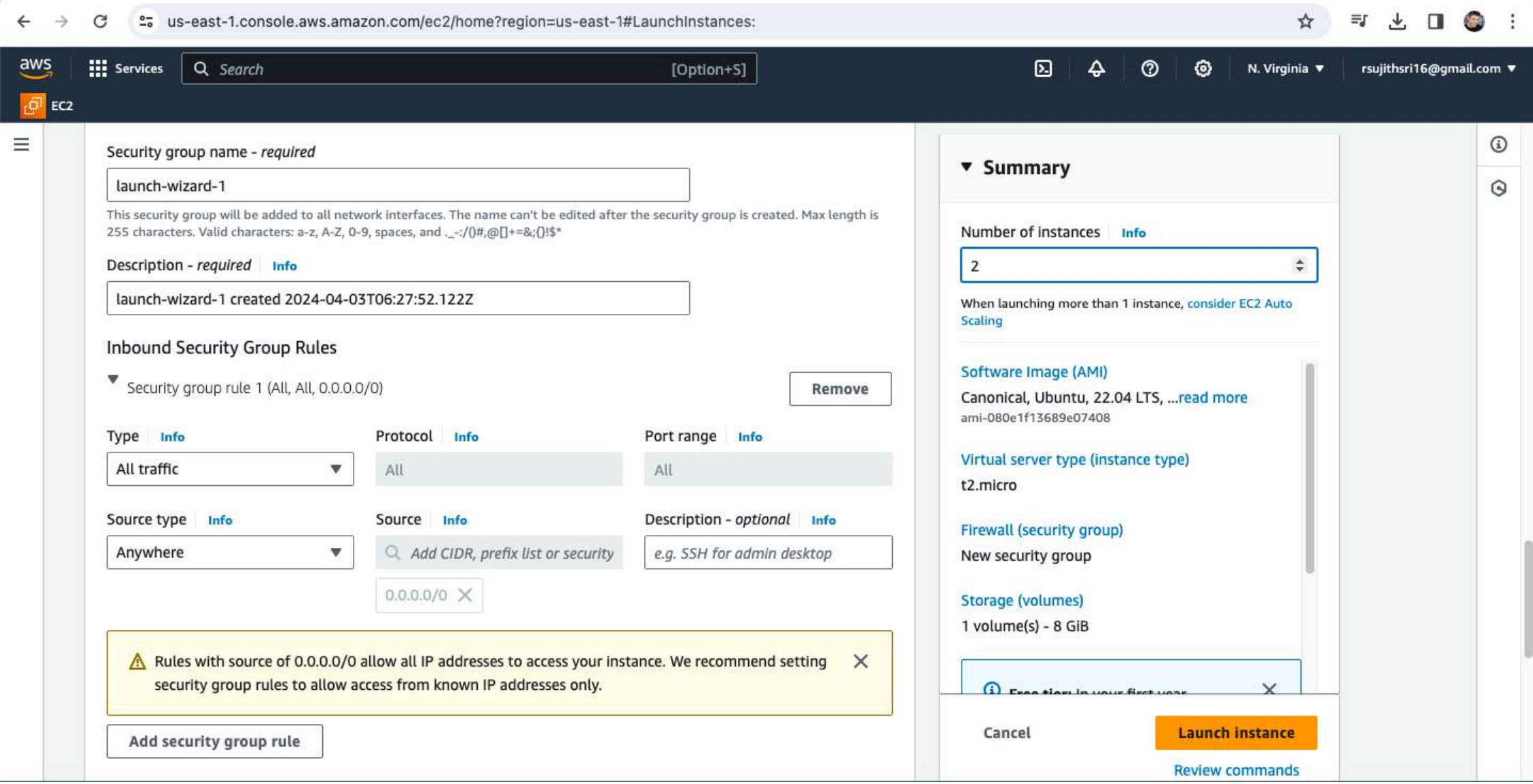
1. Create a Classic Load Balancer and register 3 EC2 instances with different web pages running in them.
2. Migrate the Classic Load Balancer into an Application Load Balancer.

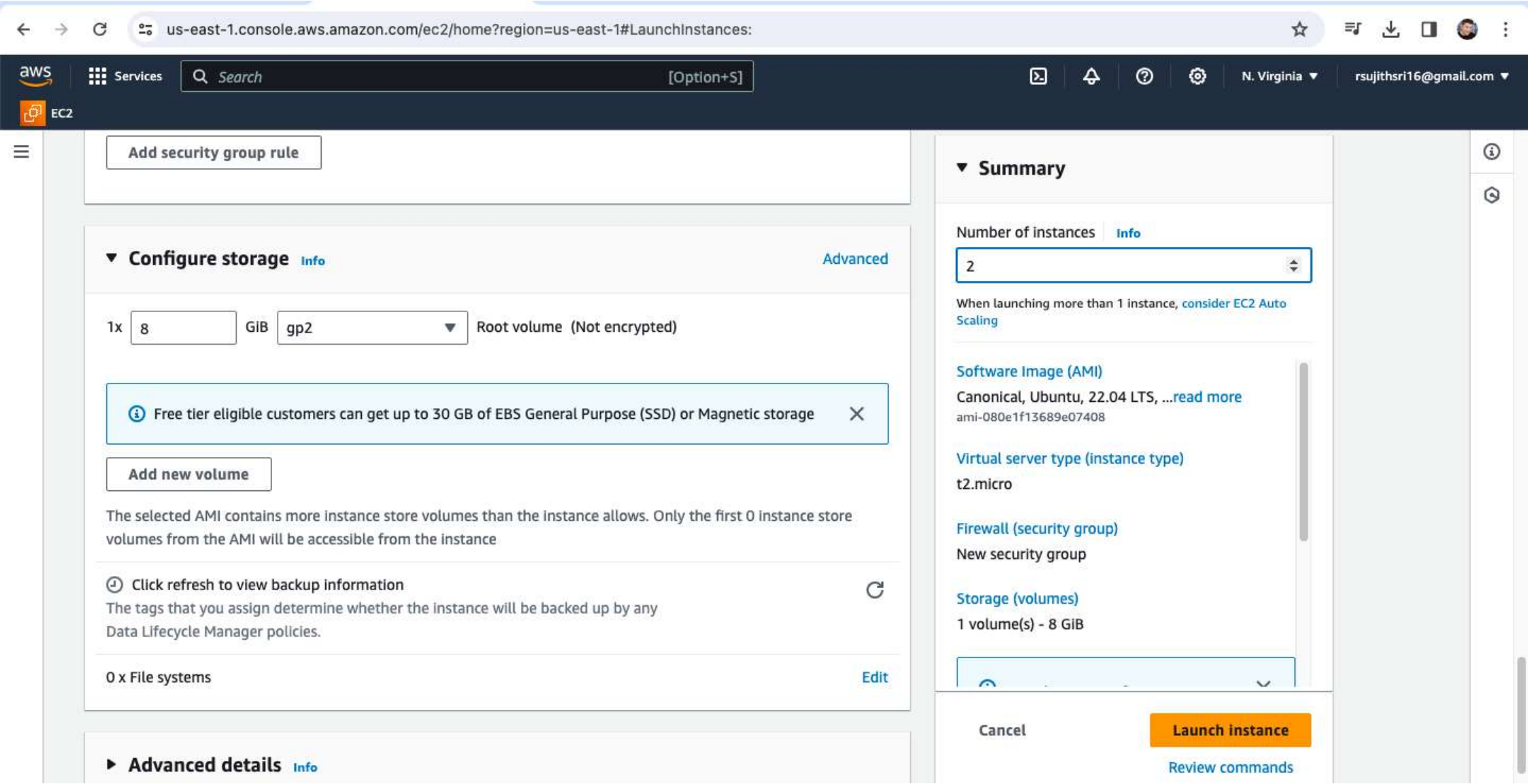

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
EC2 > Instances > Launch an instance
Launch an instance Info
Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.
Name and tags Info
Name
ubuntu-apache
Add additional tags
Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Summary
Number of instances Info
2
When launching more than 1 instance, consider EC2 Auto Scaling
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-080e1f13689e07408
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance
Review commands

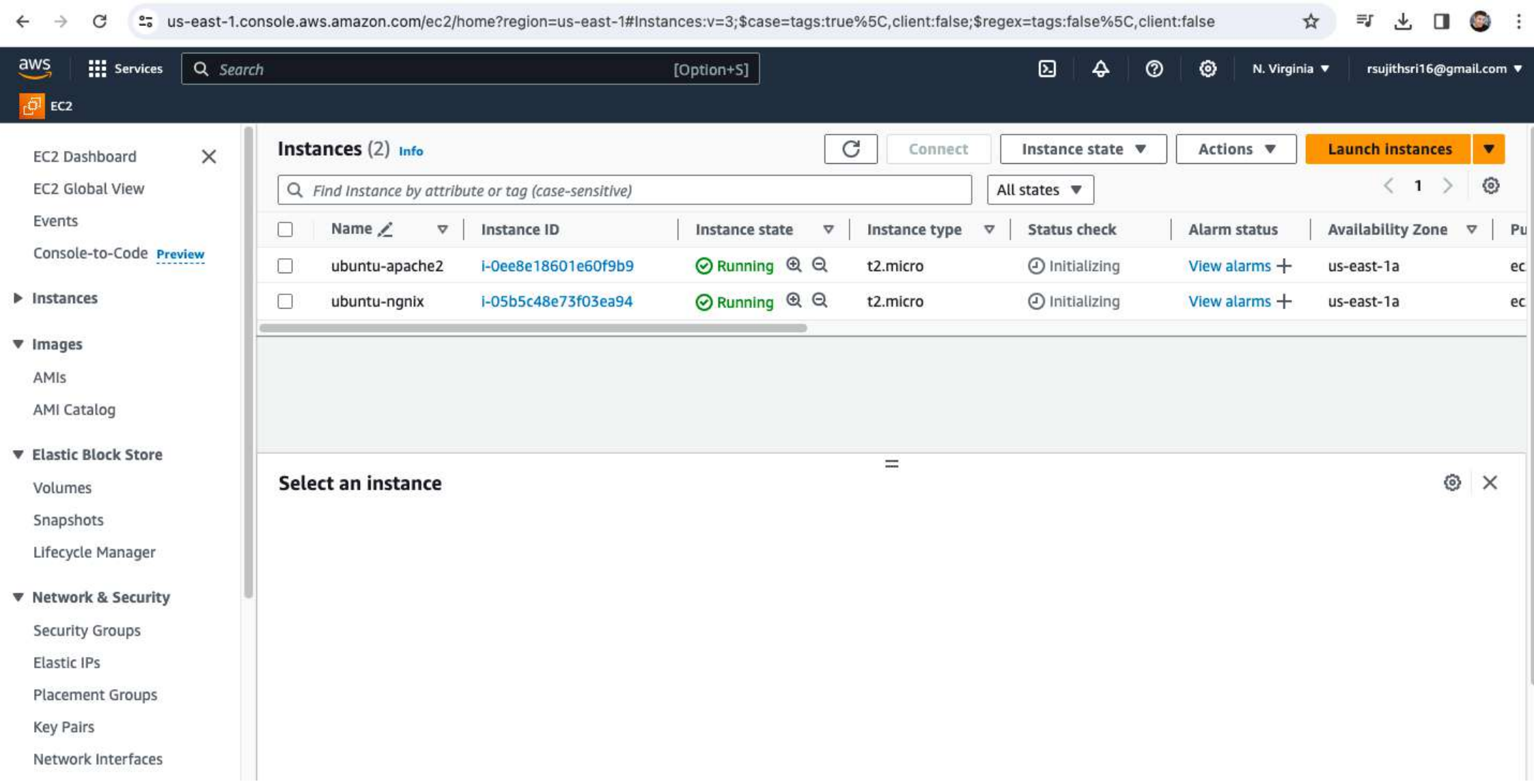

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Recents
Quick Start
Amazon Linux
macOS
Mac
Ubuntu
ubuntu
Windows
Microsoft
Red Hat
SUSE Li
SUS
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
Free tier eligible
ami-080e1f13689e07408 (64-bit (x86)) / ami-0a55ba1c20b74fc30 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs
Description
Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2024-03-01
Architecture
64-bit (x86)
AMI ID
ami-080e1f13689e07408
Verified provider
Summary
Number of instances Info
2
When launching more than 1 instance, consider EC2 Auto Scaling
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-080e1f13689e07408
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Instance type Info | Get advice
Cancel
Launch instance
Review commands

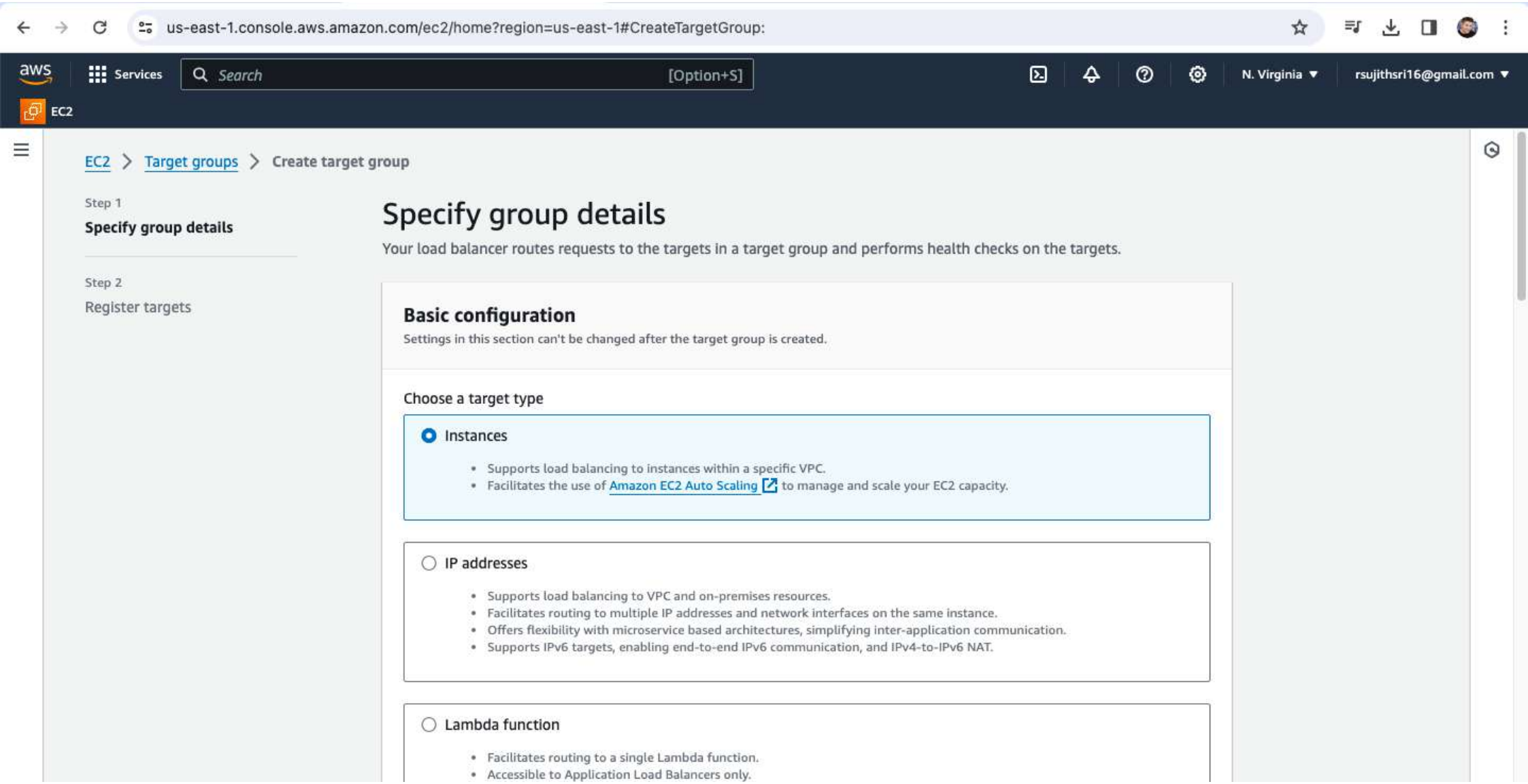

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Instance type Info | Get advice
Instance type
t2.micro
Free tier eligible
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.0716 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour
All generations
Compare instance types
Additional costs apply for AMIs with pre-installed software
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name - required
sujith123
Create new key pair
Network settings Info
Summary
Number of instances Info
2
When launching more than 1 instance, consider EC2 Auto Scaling
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-080e1f13689e07408
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance
Review commands

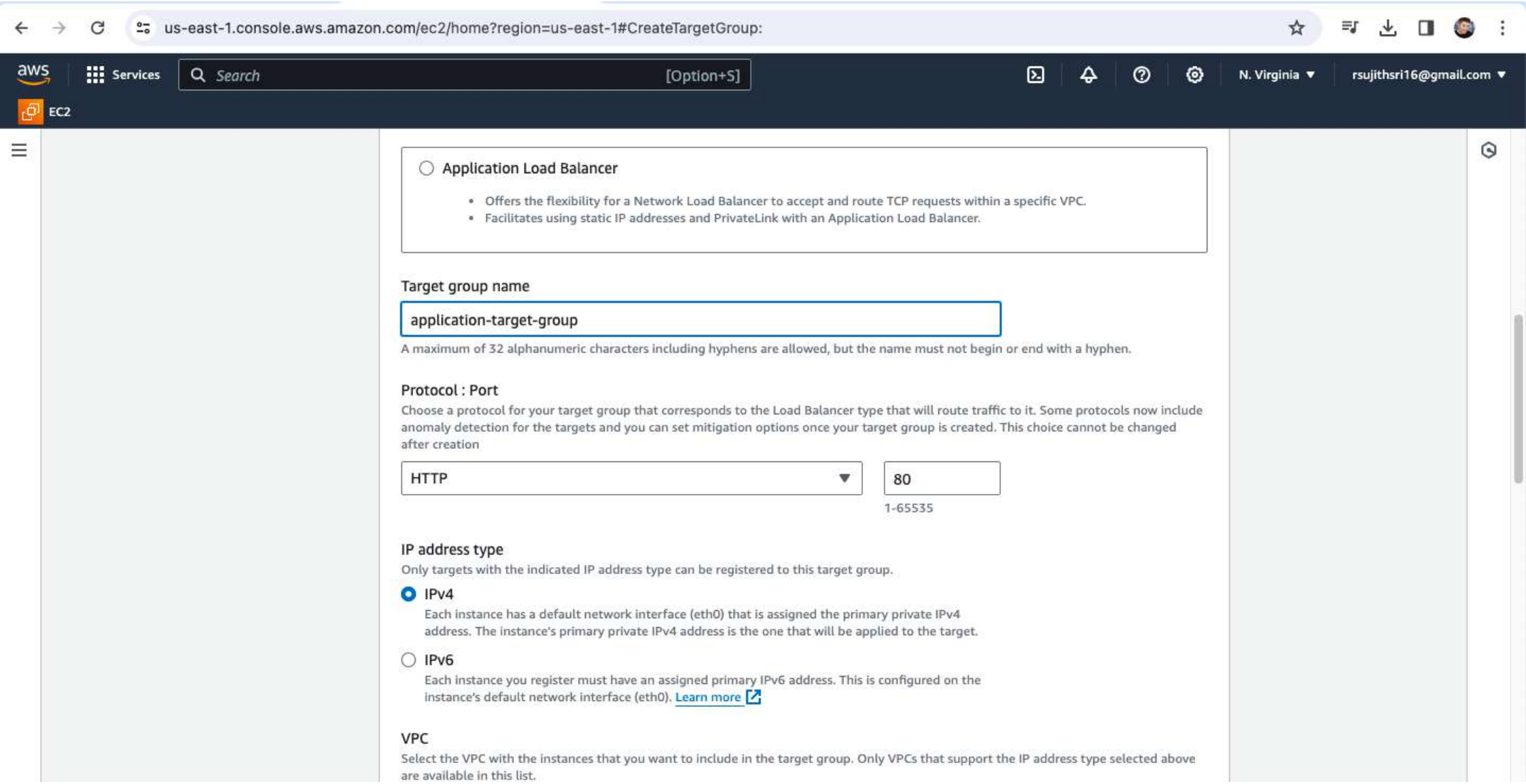

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Network settings Info
VPC - required Info
vpc-06a980b08a54688af (default)
172.31.0.0/16
Subnet Info
No preference
Create new subnet
Auto-assign public IP Info
Enable
Additional charges apply when outside of free tier allowance
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
Security group name - required
launch-wizard-1
This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#,@[]+=&;{}!$*
Description - required Info
launch-wizard-1 created 2024-04-03T06:27:52.122Z
Summary
Number of instances Info
2
When launching more than 1 instance, consider EC2 Auto Scaling
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-080e1f13689e07408
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance
Review commands


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Security group name - required
launch-wizard-1
This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#,@[]+=&;{}!$*
Description - required Info
launch-wizard-1 created 2024-04-03T06:27:52.122Z
Inbound Security Group Rules
Security group rule 1 (All, All, 0.0.0.0/0)
Remove
Type Info
All traffic
Protocol Info
All
Port range Info
All
Source type Info
Anywhere
Source Info
Add CIDR, prefix list or security
0.0.0.0/0
Description - optional Info
e.g. SSH for admin desktop
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.
Add security group rule
Summary
Number of instances Info
2
When launching more than 1 instance, consider EC2 Auto Scaling
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-080e1f13689e07408
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance
Review commands


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Add security group rule
Configure storage Info
Advanced
1x
8
GiB
gp2
Root volume (Not encrypted)
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage
Add new volume
The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance
Click refresh to view backup information
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.
0 x File systems
Edit
Advanced details Info
Summary
Number of instances Info
2
When launching more than 1 instance, consider EC2 Auto Scaling
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-080e1f13689e07408
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance
Review commands


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:v=3;$case=tags:true%5C,client:false;$regex=tags:false%5C,client:false
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
EC2 Dashboard
EC2 Global View
Events
Console-to-Code Preview
Instances
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Instances (2) Info
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
1
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
ubuntu-apache2
i-0ee8e18601e60f9b9
Running
t2.micro
Initializing
View alarms
us-east-1a
ubuntu-ngnix
i-05b5c48e73f03ea94
Running
t2.micro
Initializing
View alarms
us-east-1a
Select an instance


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
EC2 > Target groups > Create target group
Step 1
Specify group details
Step 2
Register targets
Specify group details
Your load balancer routes requests to the targets in a target group and performs health checks on the targets.
Basic configuration
Settings in this section can't be changed after the target group is created.
Choose a target type
Instances
Supports load balancing to instances within a specific VPC.
Facilitates the use of Amazon EC2 Auto Scaling to manage and scale your EC2 capacity.
IP addresses
Supports load balancing to VPC and on-premises resources.
Facilitates routing to multiple IP addresses and network interfaces on the same instance.
Offers flexibility with microservice based architectures, simplifying inter-application communication.
Supports IPv6 targets, enabling end-to-end IPv6 communication, and IPv4-to-IPv6 NAT.
Lambda function
Facilitates routing to a single Lambda function.
Accessible to Application Load Balancers only.


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Application Load Balancer
Offers the flexibility for a Network Load Balancer to accept and route TCP requests within a specific VPC.
Facilitates using static IP addresses and PrivateLink with an Application Load Balancer.
Target group name
application-target-group
A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.
Protocol : Port
Choose a protocol for your target group that corresponds to the Load Balancer type that will route traffic to it. Some protocols now include anomaly detection for the targets and you can set mitigation options once your target group is created. This choice cannot be changed after creation
HTTP
80
1-65535
IP address type
Only targets with the indicated IP address type can be registered to this target group.
IPv4
Each instance has a default network interface (eth0) that is assigned the primary private IPv4 address. The instance's primary private IPv4 address is the one that will be applied to the target.
IPv6
Each instance you register must have an assigned primary IPv6 address. This is configured on the instance's default network interface (eth0). Learn more
VPC
Select the VPC with the instances that you want to include in the target group. Only VPCs that support the IP address type selected above are available in this list.

IPv4
Each instance has a default network interface (eth0) that is assigned the primary private IPv4 address. The instance's primary private IPv4 address is the one that will be applied to the target.

IPv6
Each instance you register must have an assigned primary IPv6 address. This is configured on the instance's default network interface (eth0). Learn more

VPC
Select the VPC with the instances that you want to include in the target group. Only VPCs that support the IP address type selected above are available in this list.

-
vpc-06a980b08a54688af
IPv4 VPC CIDR: 172.31.0.0/16

Protocol version

HTTP1
Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.

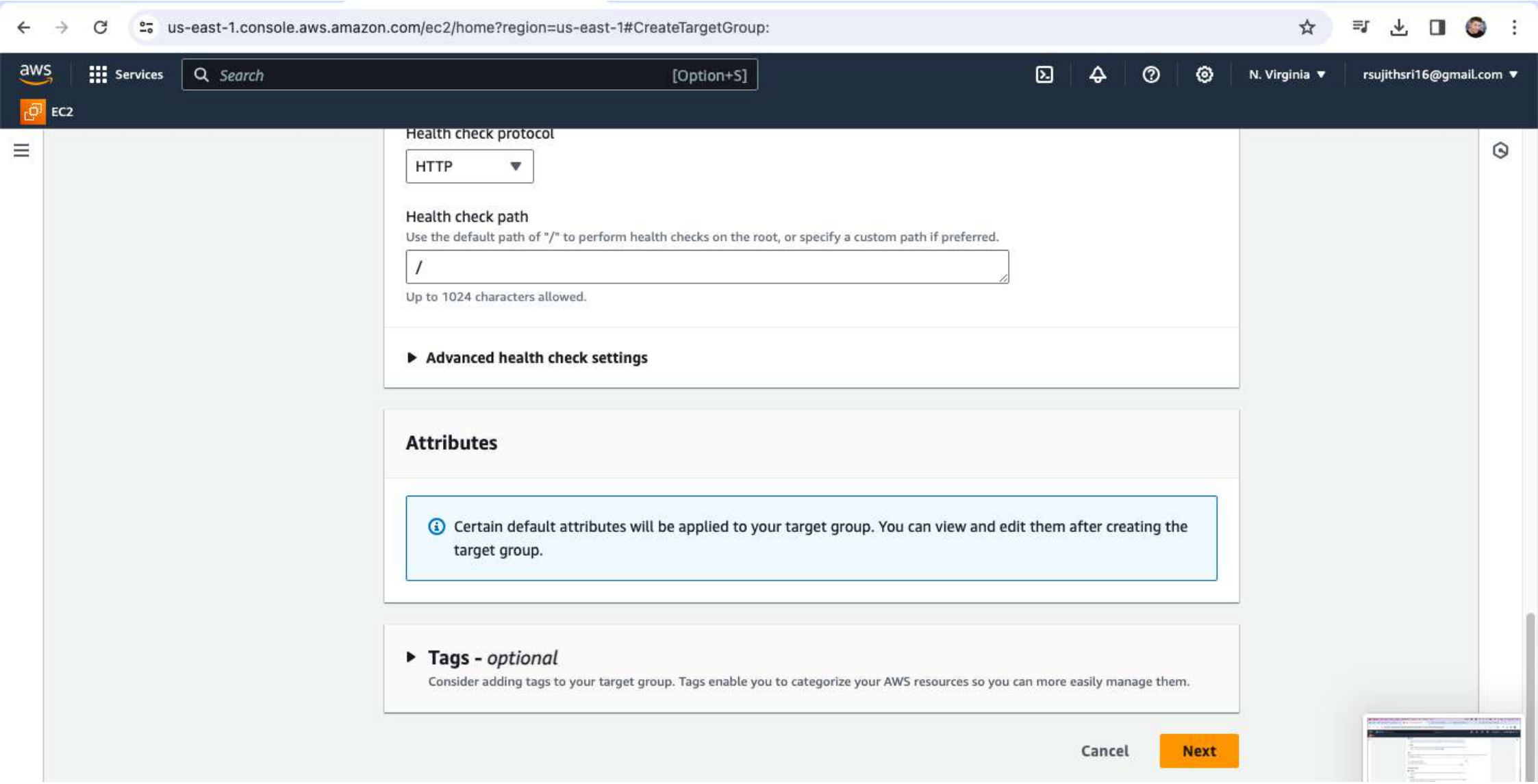
HTTP2
Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available.

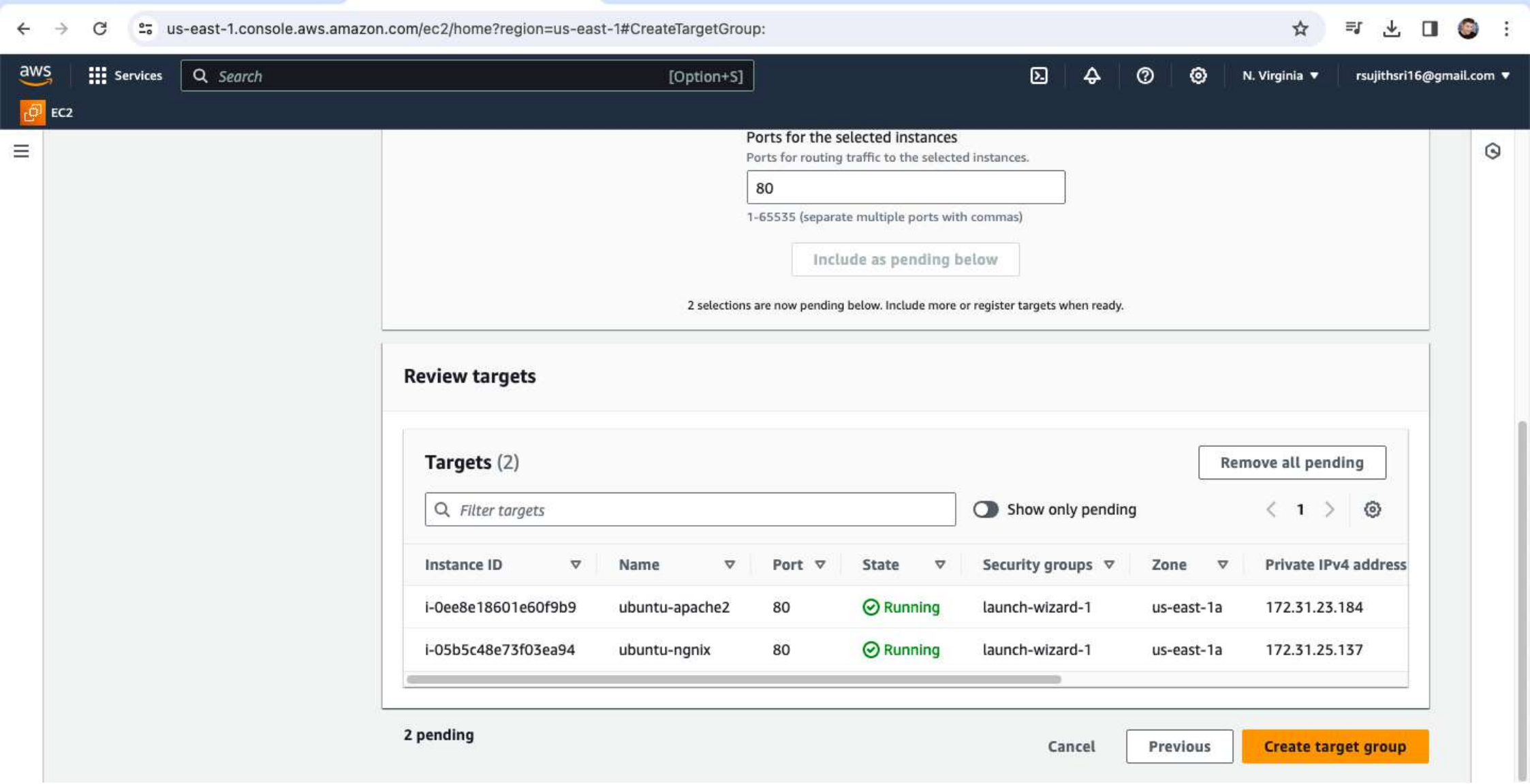
gRPC
Send requests to targets using gRPC. Supported when the request protocol is gRPC.

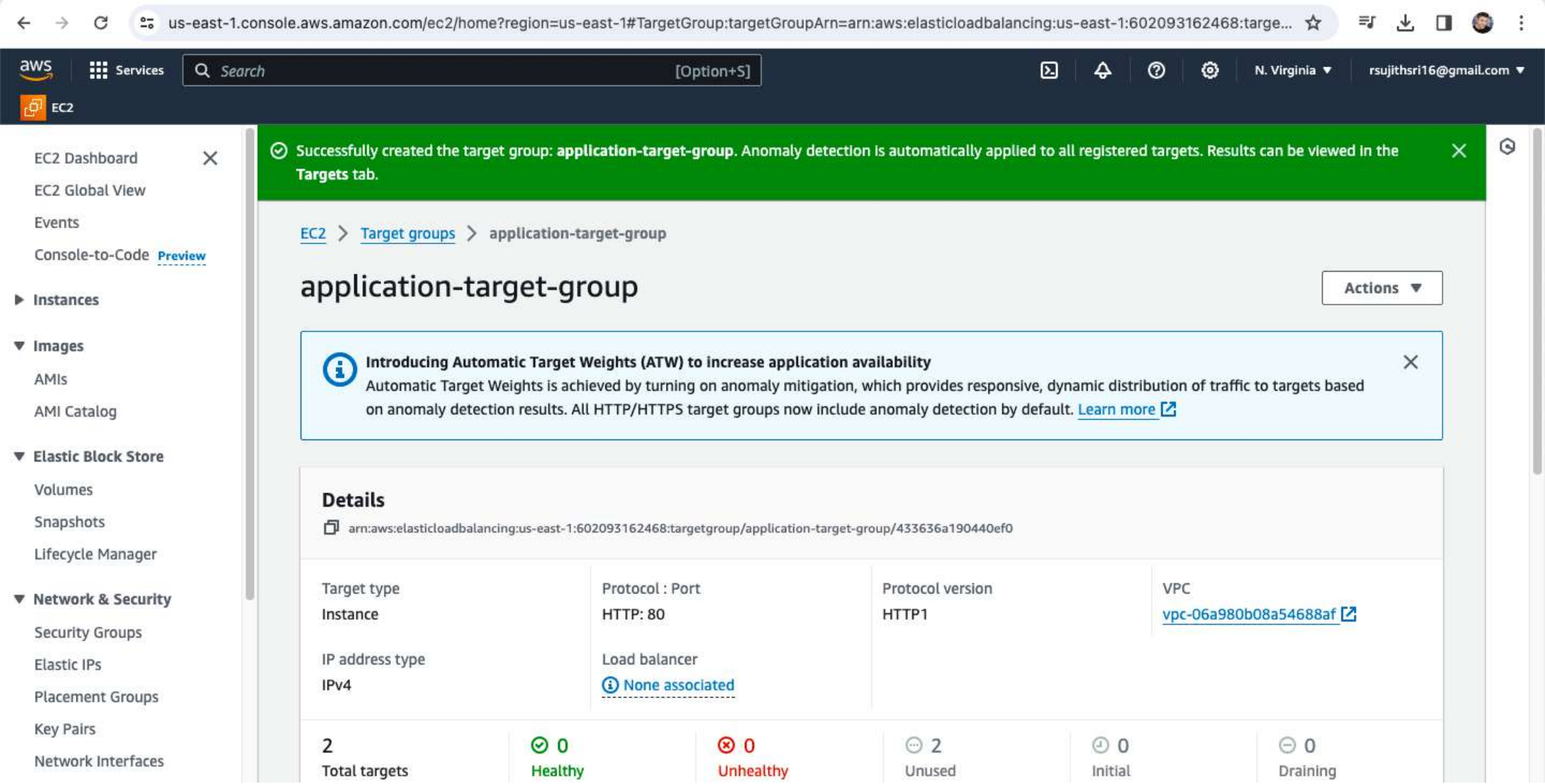
Health checks

The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

Health check protocol


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Health check protocol
HTTP
Health check path
Use the default path of "/" to perform health checks on the root, or specify a custom path if preferred.
/
Up to 1024 characters allowed.
Advanced health check settings
Attributes
Certain default attributes will be applied to your target group. You can view and edit them after creating the target group.
Tags - optional
Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.
Cancel
Next


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Ports for the selected instances
Ports for routing traffic to the selected instances.
80
1-65535 (separate multiple ports with commas)
Include as pending below
2 selections are now pending below. Include more or register targets when ready.
Review targets
Targets (2)
Remove all pending
Filter targets
Show only pending
1
Instance ID
Name
Port
State
Security groups
Zone
Private IPv4 address
i-0ee8e18601e60f9b9
ubuntu-apache2
80
Running
launch-wizard-1
us-east-1a
172.31.23.184
i-05b5c48e73f03ea94
ubuntu-ngnix
80
Running
launch-wizard-1
us-east-1a
172.31.25.137
2 pending
Cancel
Previous
Create target group


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:602093162468:targe...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
EC2 Dashboard
EC2 Global View
Events
Console-to-Code Preview
Instances
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Successfully created the target group: application-target-group. Anomaly detection is automatically applied to all registered targets. Results can be viewed in the Targets tab.
EC2 > Target groups > application-target-group
application-target-group
Actions
Introducing Automatic Target Weights (ATW) to increase application availability
Automatic Target Weights is achieved by turning on anomaly mitigation, which provides responsive, dynamic distribution of traffic to targets based on anomaly detection results. All HTTP/HTTPS target groups now include anomaly detection by default. Learn more
Details
arn:aws:elasticloadbalancing:us-east-1:602093162468:targetgroup/application-target-group/433636a190440ef0
Target type
Instance
Protocol : Port
HTTP: 80
Protocol version
HTTP1
VPC
vpc-06a980b08a54688af
IP address type
IPv4
Load balancer
None associated
2
Total targets
0
Healthy
0
Unhealthy
2
Unused
0
Initial
0
Draining

Create Application Load Balancer Info

The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

How Application Load Balancers work

Basic configuration

Load balancer name

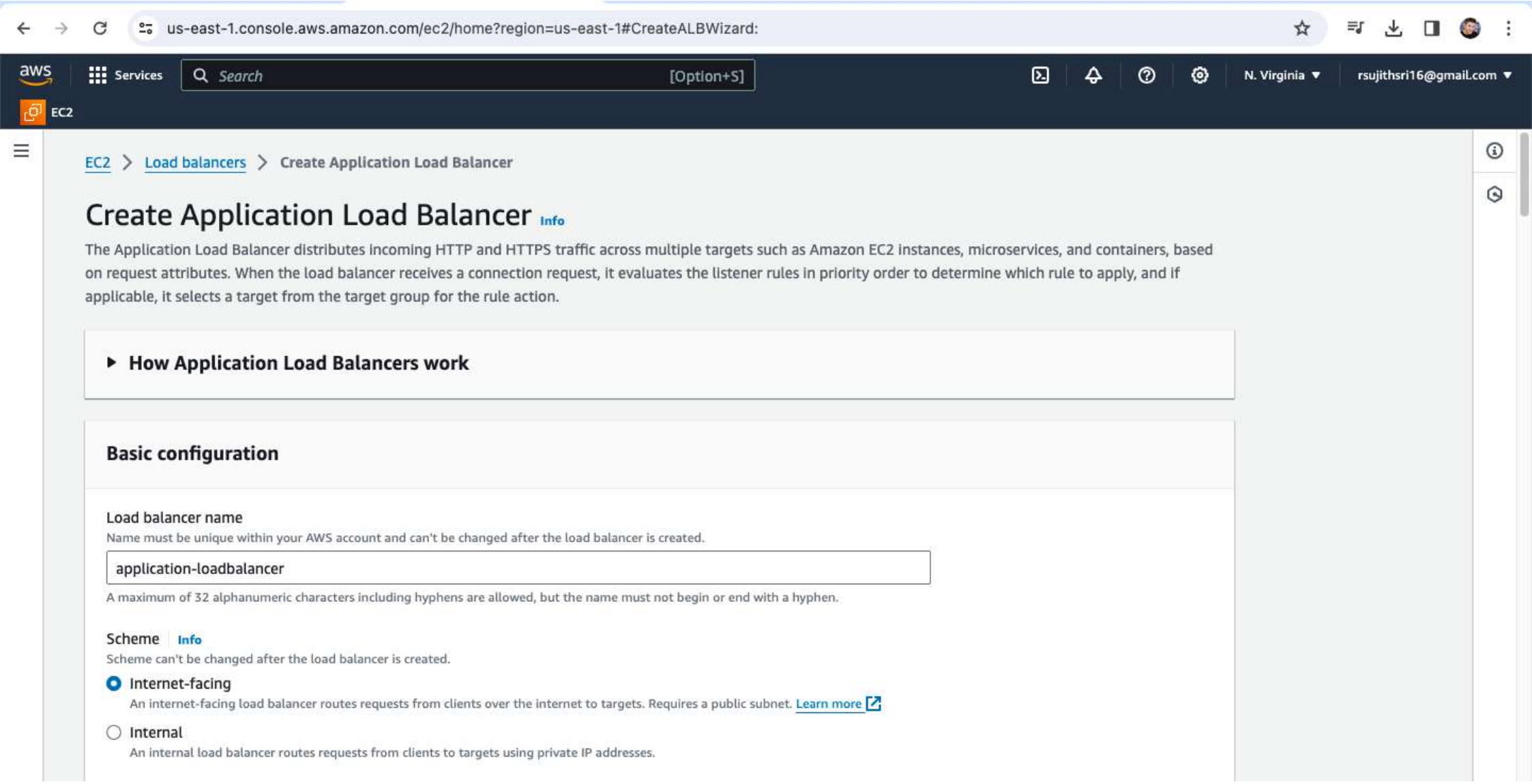
Name must be unique within your AWS account and can't be changed after the load balancer is created.

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme Info

Scheme can't be changed after the load balancer is created.

- (•) Internet-facing
  An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. Learn more
- ( ) Internal
  An internal load balancer routes requests from clients to targets using private IP addresses.


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
EC2 > Load balancers > Create Application Load Balancer
Create Application Load Balancer Info
The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.
How Application Load Balancers work
Basic configuration
Load balancer name
Name must be unique within your AWS account and can't be changed after the load balancer is created.
application-loadbalancer
A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.
Scheme Info
Scheme can't be changed after the load balancer is created.
Internet-facing
An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. Learn more
Internal
An internal load balancer routes requests from clients to targets using private IP addresses.

Dualstack
Includes IPv4 and IPv6 addresses.

Network mapping Info

The load balancer routes traffic to targets in the selected subnets, and in accordance with your IP address settings.

VPC Info

Select the virtual private cloud (VPC) for your targets or you can create a new VPC. Only VPCs with an internet gateway are enabled for selection. The selected VPC can't be changed after the load balancer is created. To confirm the VPC for your targets, view your target groups.

-
vpc-06a980b08a54688af
IPv4 VPC CIDR: 172.31.0.0/16

Mappings Info

Select at least two Availability Zones and one subnet per zone. The load balancer routes traffic to targets in these Availability Zones only. Availability Zones that are not supported by the load balancer or the VPC are not available for selection.

us-east-1a (use1-az4)

Subnet

subnet-0bcec29910083b037

IPv4 address

Assigned by AWS

us-east-1b (use1-az6)

Subnet

us-east-1b (use1-az6)

Subnet

subnet-02c45422015d65a56

IPv4 address

Assigned by AWS

us-east-1c (use1-az1)

Subnet

subnet-011fb2ffac3d8feee

IPv4 address

Assigned by AWS

us-east-1d (use1-az2)

Subnet

subnet-081d71be5935750e2

IPv4 address

Assigned by AWS

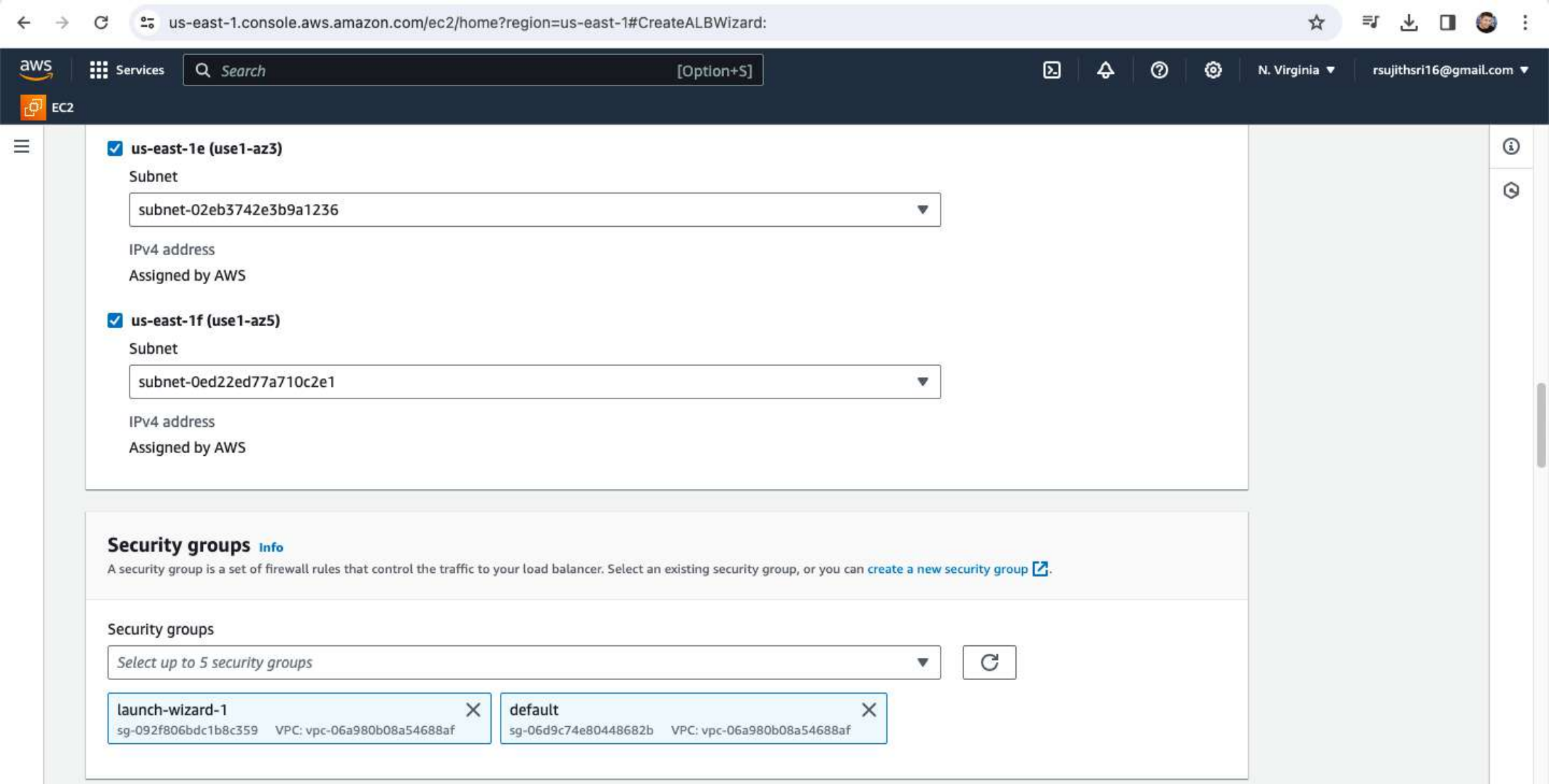
us-east-1e (use1-az3)

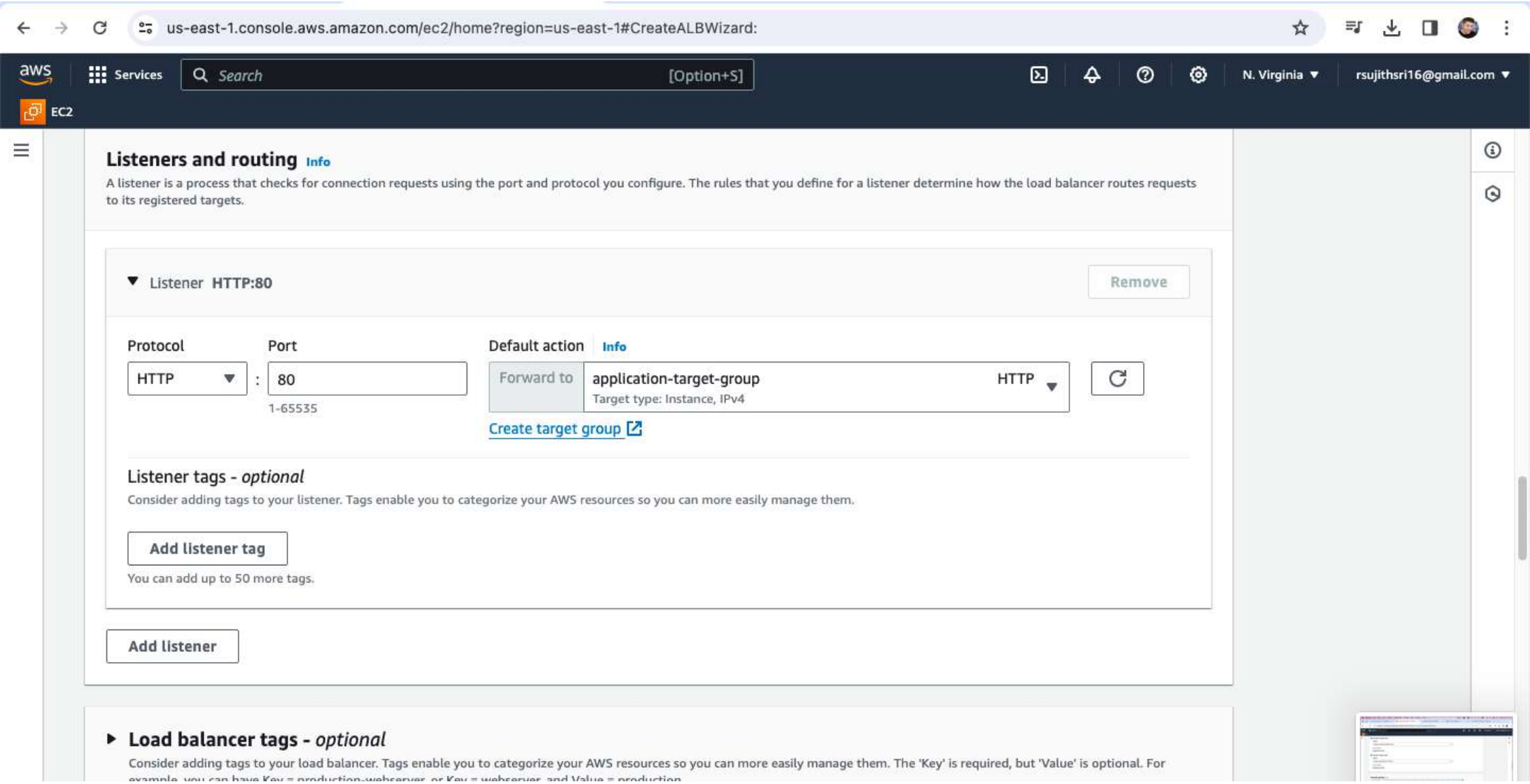
Subnet

subnet-02eb3742e3b9a1236

IPv4 address

Assigned by AWS


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
us-east-1e (use1-az3)
Subnet
subnet-02eb3742e3b9a1236
IPv4 address
Assigned by AWS
us-east-1f (use1-az5)
Subnet
subnet-0ed22ed77a710c2e1
IPv4 address
Assigned by AWS
Security groups Info
A security group is a set of firewall rules that control the traffic to your load balancer. Select an existing security group, or you can create a new security group.
Security groups
Select up to 5 security groups
launch-wizard-1
sg-092f806bdc1b8c359 VPC: vpc-06a980b08a54688af
default
sg-06d9c74e80448682b VPC: vpc-06a980b08a54688af


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Listeners and routing Info
A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.
Listener HTTP:80
Remove
Protocol
Port
HTTP
80
1-65535
Default action Info
Forward to
application-target-group
HTTP
Target type: Instance, IPv4
Create target group
Listener tags - optional
Consider adding tags to your listener. Tags enable you to categorize your AWS resources so you can more easily manage them.
Add listener tag
You can add up to 50 more tags.
Add listener
Load balancer tags - optional
Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For

Load balancer tags - *optional*

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For example, you can have Key = production-webserver, or Key = webserver, and Value = production.

Optimize with service integrations - *optional*

Optimize your load balancing architecture by integrating AWS services with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the load balancer's "Integrations" tab.

AWS Web Application Firewall (WAF) Info

Optimizes: **Security**

Additional charges apply

☐ Include WAF security protections behind the load balancer

Associates a pre-defined web ACL that includes the AWS-recommended security protections. Alternatively, you can associate any of your existing WAF web ACLs for custom protections.

AWS Global Accelerator Info

Optimizes: **Performance, Availability, Security**

Additional charges apply

☐ Create an accelerator

An accelerator will be created in your account. The accelerator provides 2 global static IPs that act as a fixed entry point to your load balancer.

Review

Review the load balancer configurations and make changes if needed. After you finish reviewing the configurations, choose **Create load balancer**.

Summary

Review and confirm your configurations. Estimate cost

Basic configuration Edit

application-loadbalancer

- Internet-facing
- IPv4

Security groups Edit

- launch-wizard-1
  sg-092f806bdc1b8c359
- default
  sg-06d9c74e80448682b

Network mapping Edit

VPC vpc-06a980b08a54688af

- us-east-1a
  subnet-0bcec29910083b037
- us-east-1b
  subnet-02c45422015d65a56
- us-east-1c
  subnet-011fb2ffac3d8feee
- us-east-1d
  subnet-081d71be5935750e2
- us-east-1e
  subnet-02eb3742e3b9a1236
- us-east-1f
  subnet-0ed22ed77a710c2e1

Listeners and routing Edit

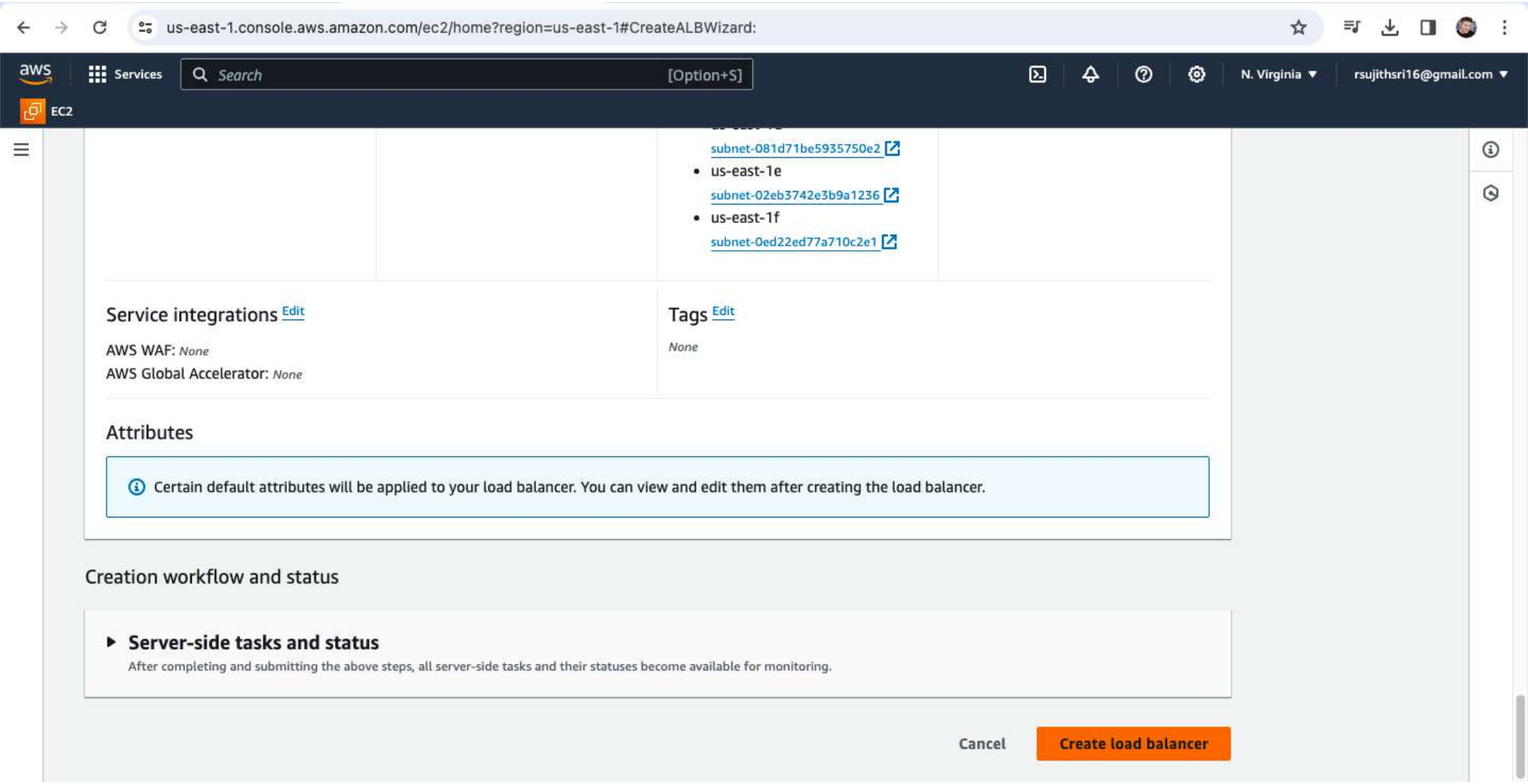
- HTTP:80 defaults to
  application-target-group

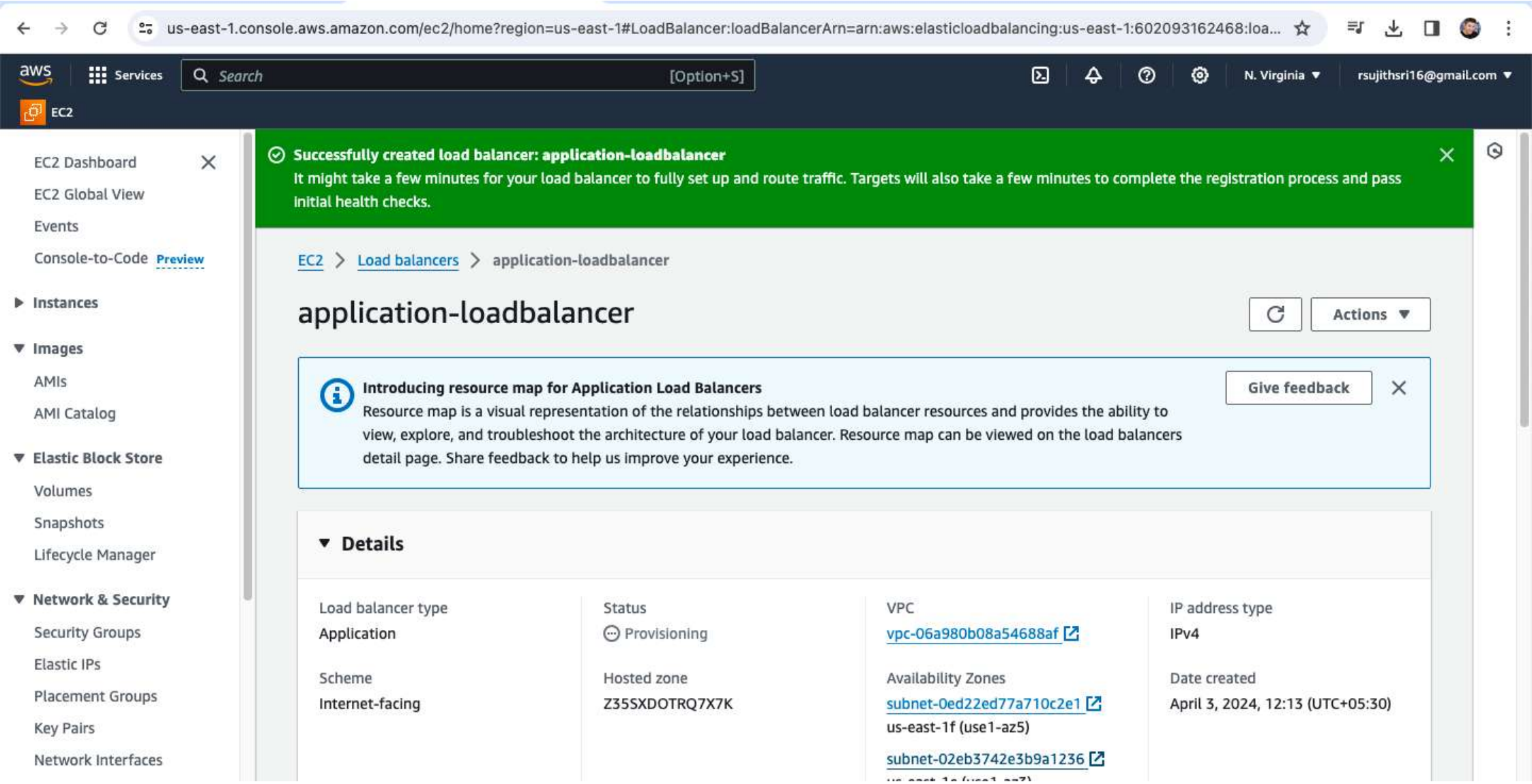
Service integrations Edit

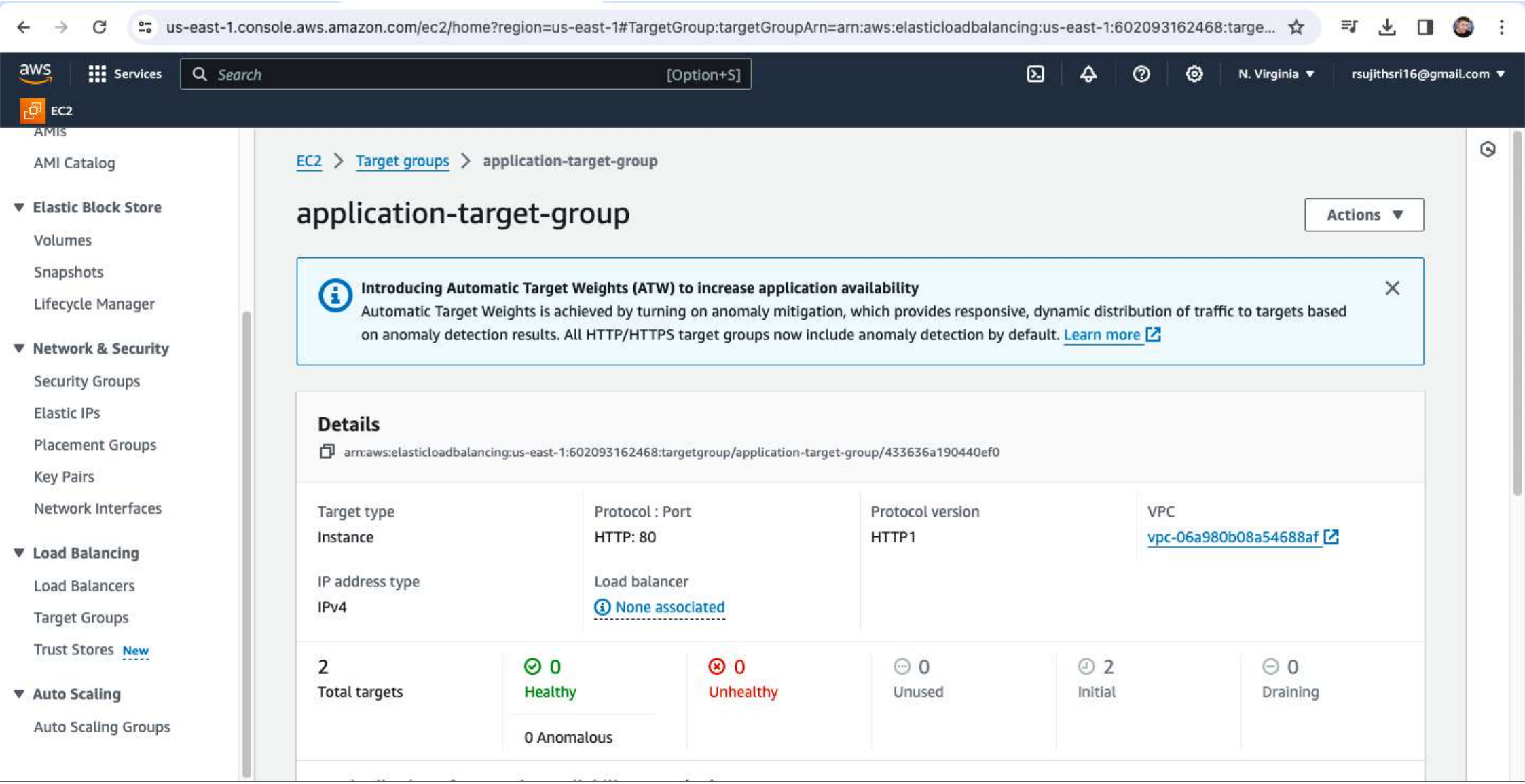
AWS WAF: *None*

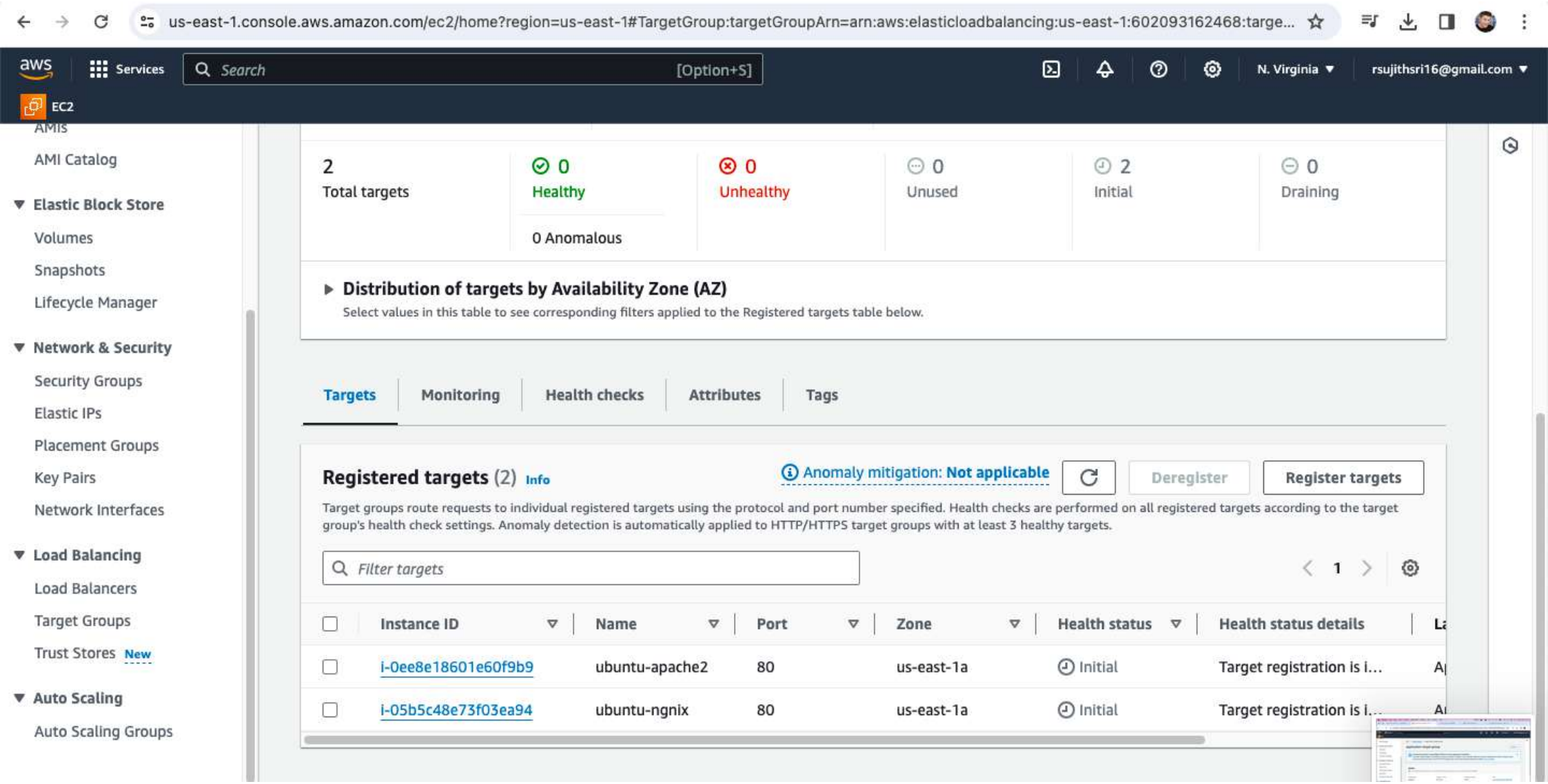
Tags Edit

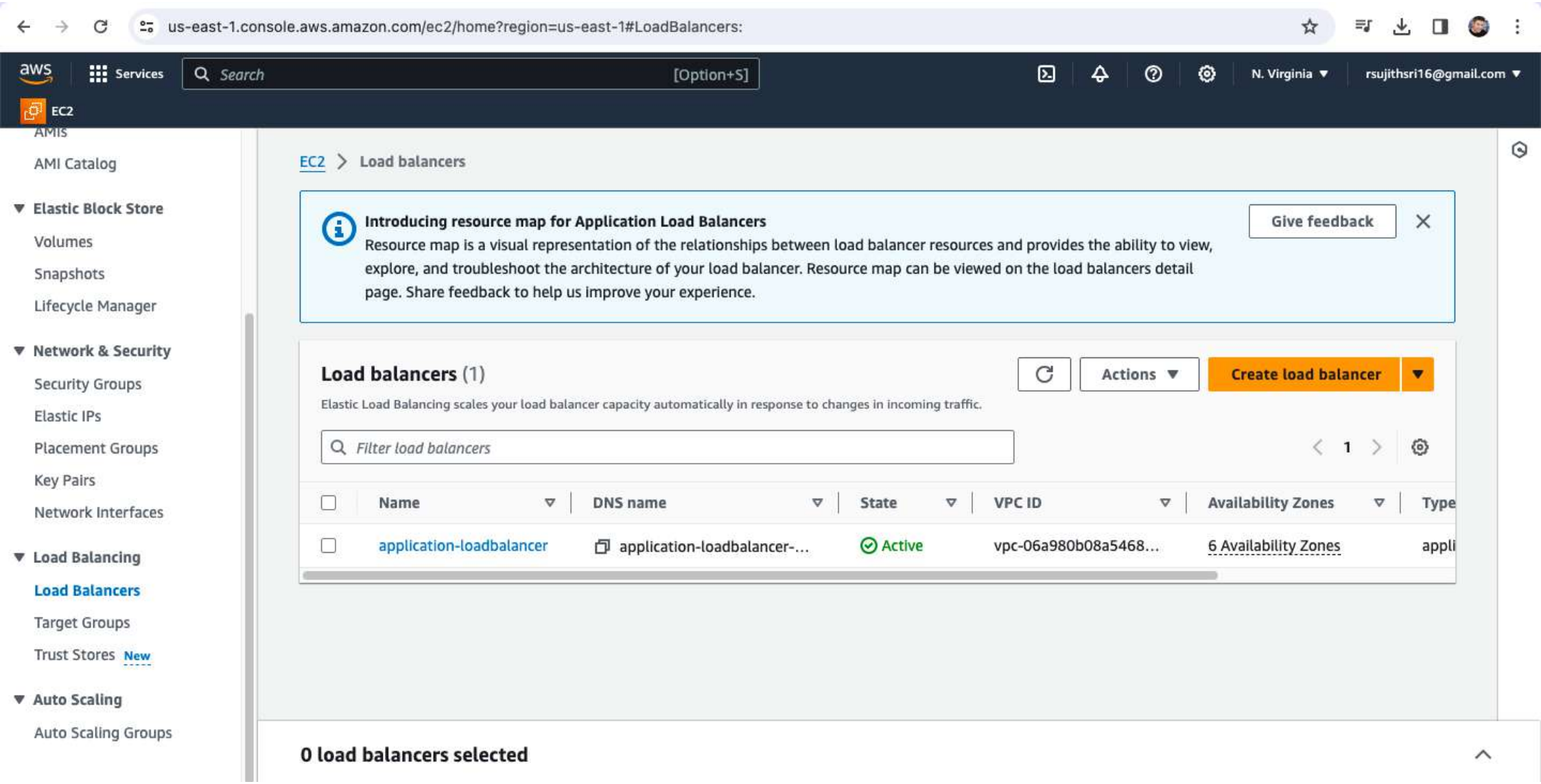
None

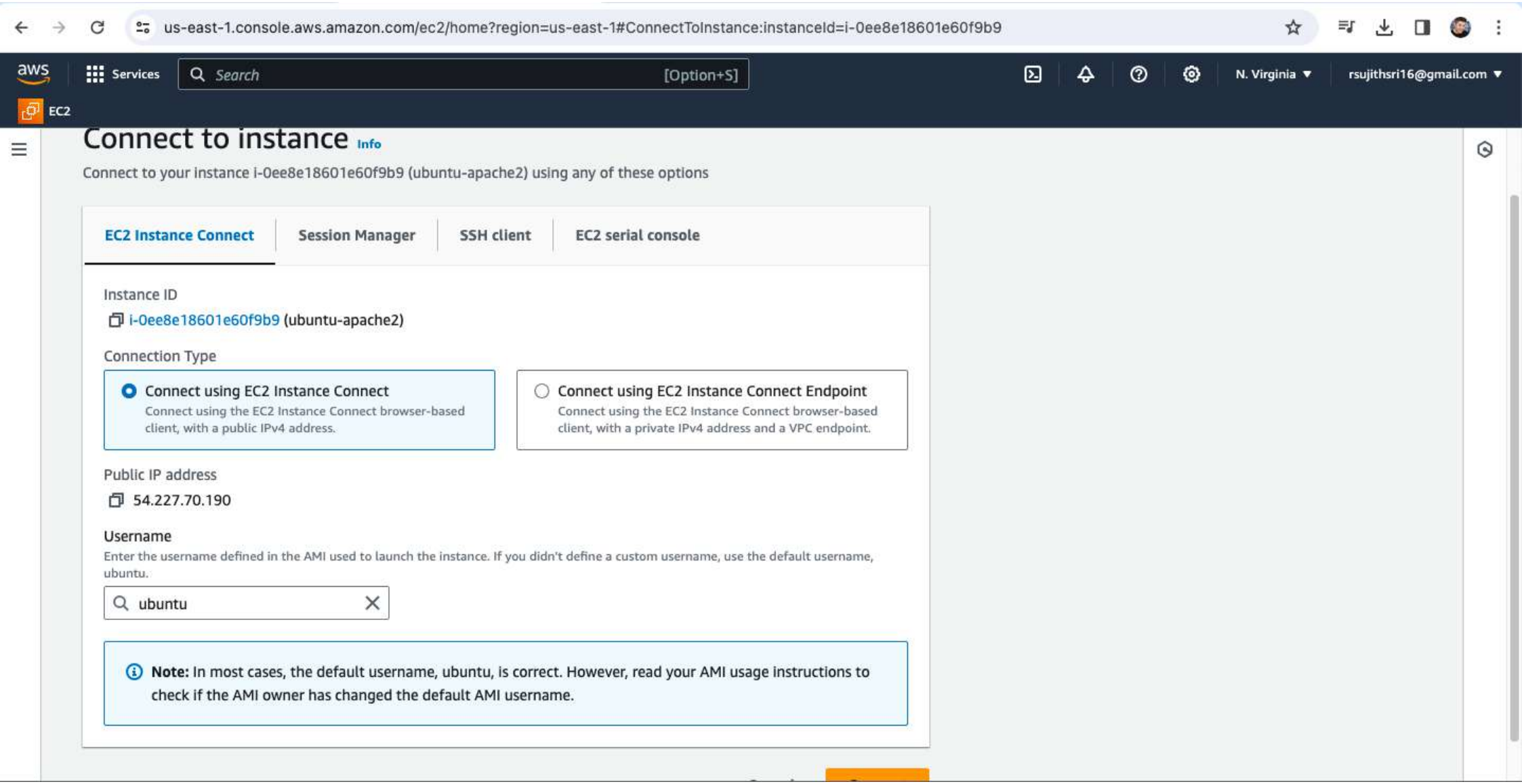

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateALBWizard:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
subnet-081d71be5935750e2
us-east-1e
subnet-02eb3742e3b9a1236
us-east-1f
subnet-0ed22ed77a710c2e1
Service integrations Edit
AWS WAF: None
AWS Global Accelerator: None
Tags Edit
None
Attributes
Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.
Creation workflow and status
Server-side tasks and status
After completing and submitting the above steps, all server-side tasks and their statuses become available for monitoring.
Cancel
Create load balancer

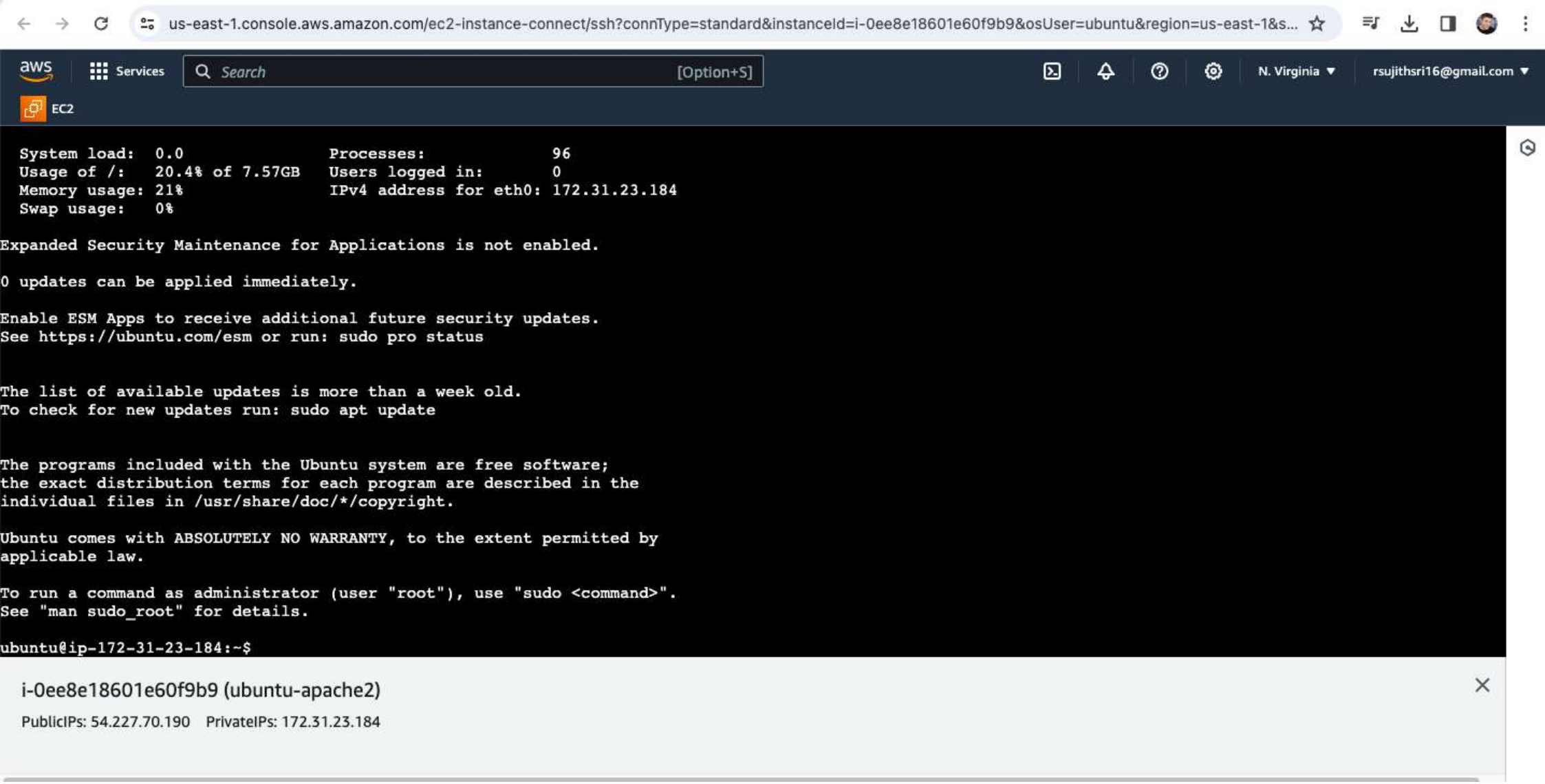

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LoadBalancer:loadBalancerArn=arn:aws:elasticloadbalancing:us-east-1:602093162468:loa...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
EC2 Dashboard
EC2 Global View
Events
Console-to-Code Preview
Instances
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Successfully created load balancer: application-loadbalancer
It might take a few minutes for your load balancer to fully set up and route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.
EC2 > Load balancers > application-loadbalancer
application-loadbalancer
Actions
Introducing resource map for Application Load Balancers
Resource map is a visual representation of the relationships between load balancer resources and provides the ability to view, explore, and troubleshoot the architecture of your load balancer. Resource map can be viewed on the load balancers detail page. Share feedback to help us improve your experience.
Give feedback
Details
Load balancer type
Application
Status
Provisioning
VPC
vpc-06a980b08a54688af
IP address type
IPv4
Scheme
Internet-facing
Hosted zone
Z35SXDOTRQ7X7K
Availability Zones
subnet-0ed22ed77a710c2e1
us-east-1f (use1-az5)
subnet-02eb3742e3b9a1236
Date created
April 3, 2024, 12:13 (UTC+05:30)

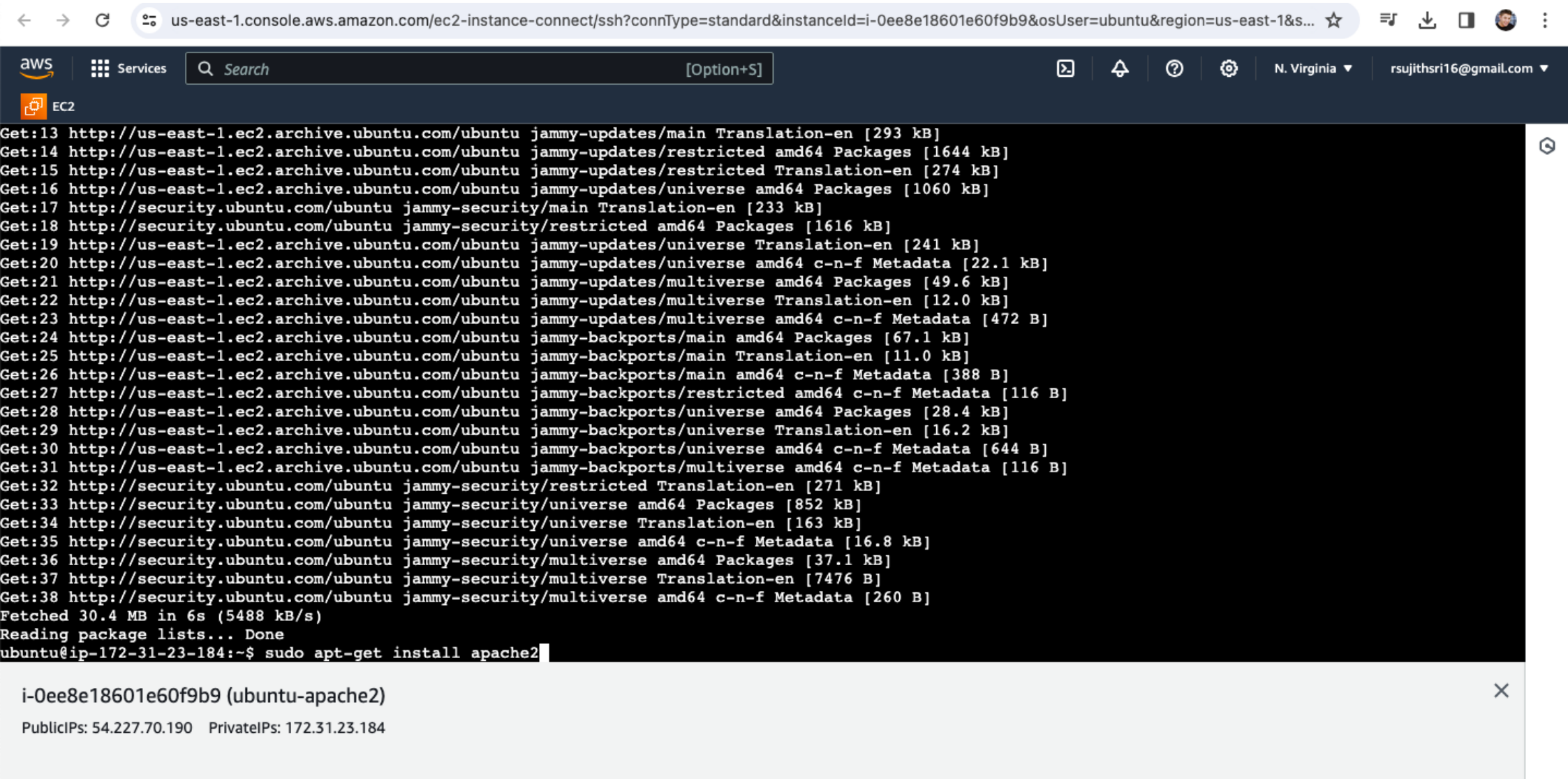

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:602093162468:targe...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores New
Auto Scaling
Auto Scaling Groups
EC2 > Target groups > application-target-group
application-target-group
Actions
Introducing Automatic Target Weights (ATW) to increase application availability
Automatic Target Weights is achieved by turning on anomaly mitigation, which provides responsive, dynamic distribution of traffic to targets based on anomaly detection results. All HTTP/HTTPS target groups now include anomaly detection by default. Learn more
Details
arn:aws:elasticloadbalancing:us-east-1:602093162468:targetgroup/application-target-group/433636a190440ef0
Target type
Instance
Protocol : Port
HTTP: 80
Protocol version
HTTP1
VPC
vpc-06a980b08a54688af
IP address type
IPv4
Load balancer
None associated
2
Total targets
0
Healthy
0 Anomalous
0
Unhealthy
0
Unused
2
Initial
0
Draining

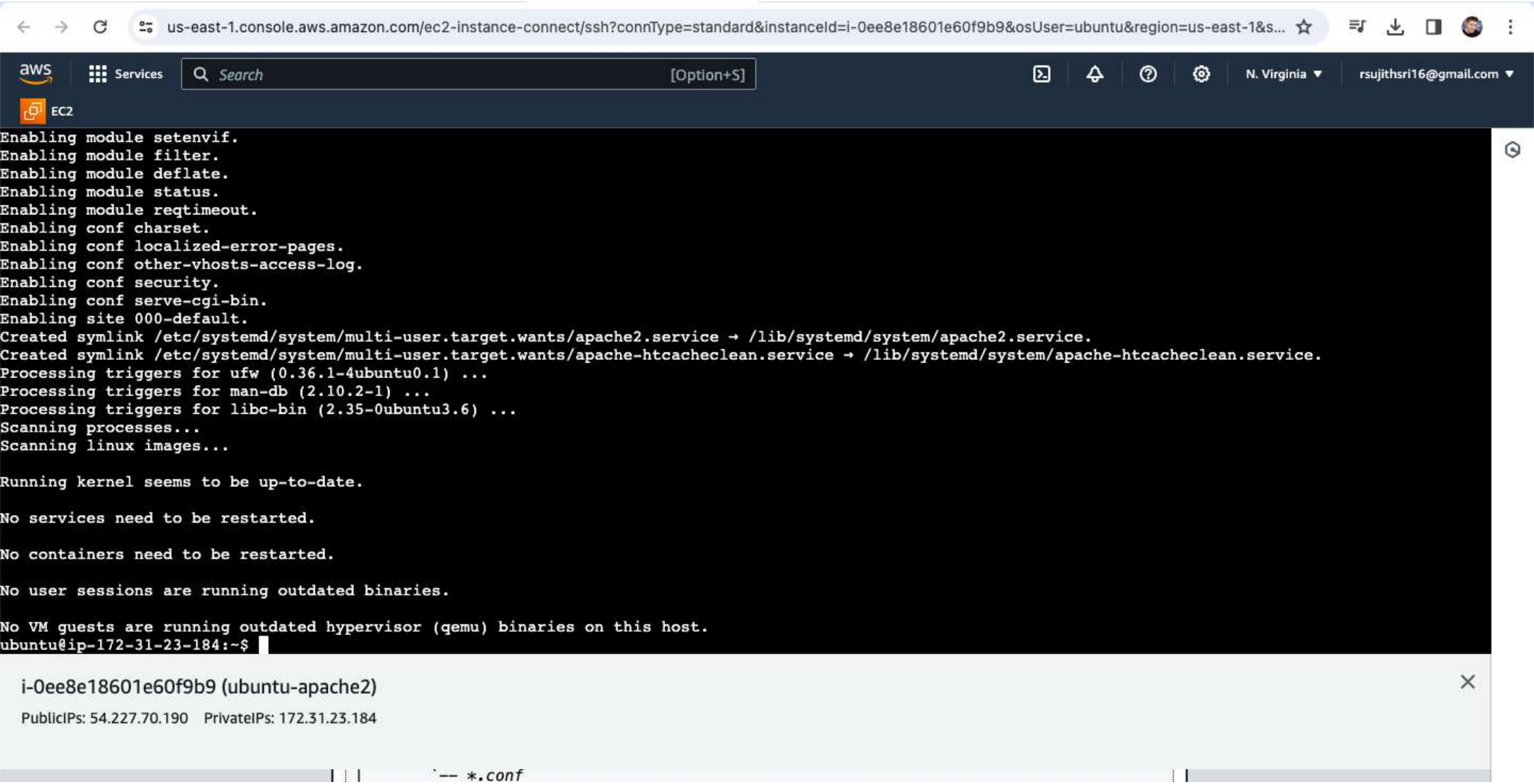

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:602093162468:targe...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores New
Auto Scaling
Auto Scaling Groups
2
Total targets
0
Healthy
0 Anomalous
0
Unhealthy
0
Unused
2
Initial
0
Draining
Distribution of targets by Availability Zone (AZ)
Select values in this table to see corresponding filters applied to the Registered targets table below.
Targets
Monitoring
Health checks
Attributes
Tags
Registered targets (2) Info
Anomaly mitigation: Not applicable
Deregister
Register targets
Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.
Filter targets
1
Instance ID
Name
Port
Zone
Health status
Health status details
i-0ee8e18601e60f9b9
ubuntu-apache2
80
us-east-1a
Initial
Target registration is i...
i-05b5c48e73f03ea94
ubuntu-ngnix
80
us-east-1a
Initial
Target registration is i...

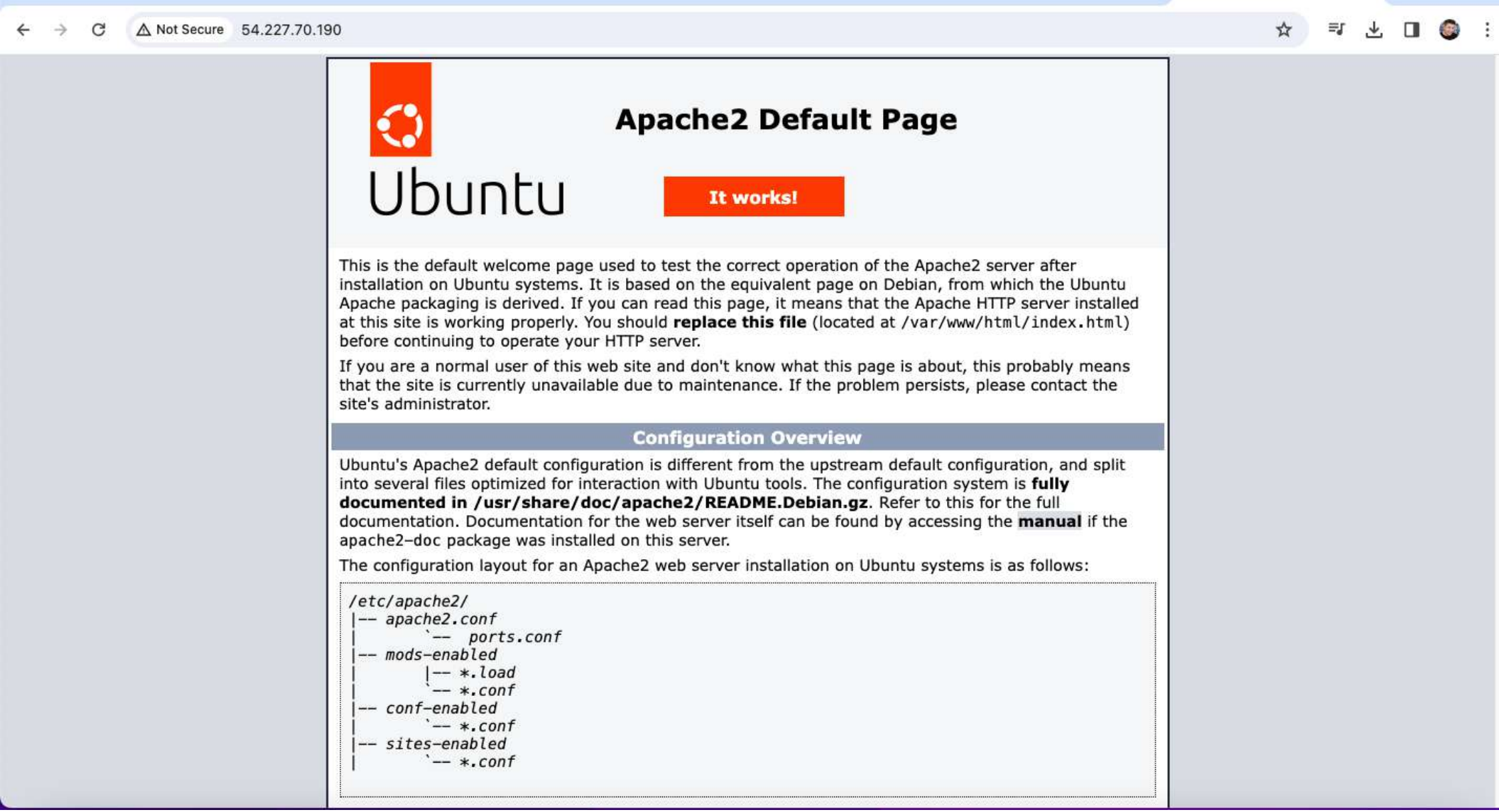

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LoadBalancers:
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores New
Auto Scaling
Auto Scaling Groups
EC2 > Load balancers
Introducing resource map for Application Load Balancers
Resource map is a visual representation of the relationships between load balancer resources and provides the ability to view, explore, and troubleshoot the architecture of your load balancer. Resource map can be viewed on the load balancers detail page. Share feedback to help us improve your experience.
Give feedback
Load balancers (1)
Actions
Create load balancer
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.
Filter load balancers
1
Name
DNS name
State
VPC ID
Availability Zones
Type
application-loadbalancer
application-loadbalancer-...
Active
vpc-06a980b08a5468...
6 Availability Zones
appli
0 load balancers selected

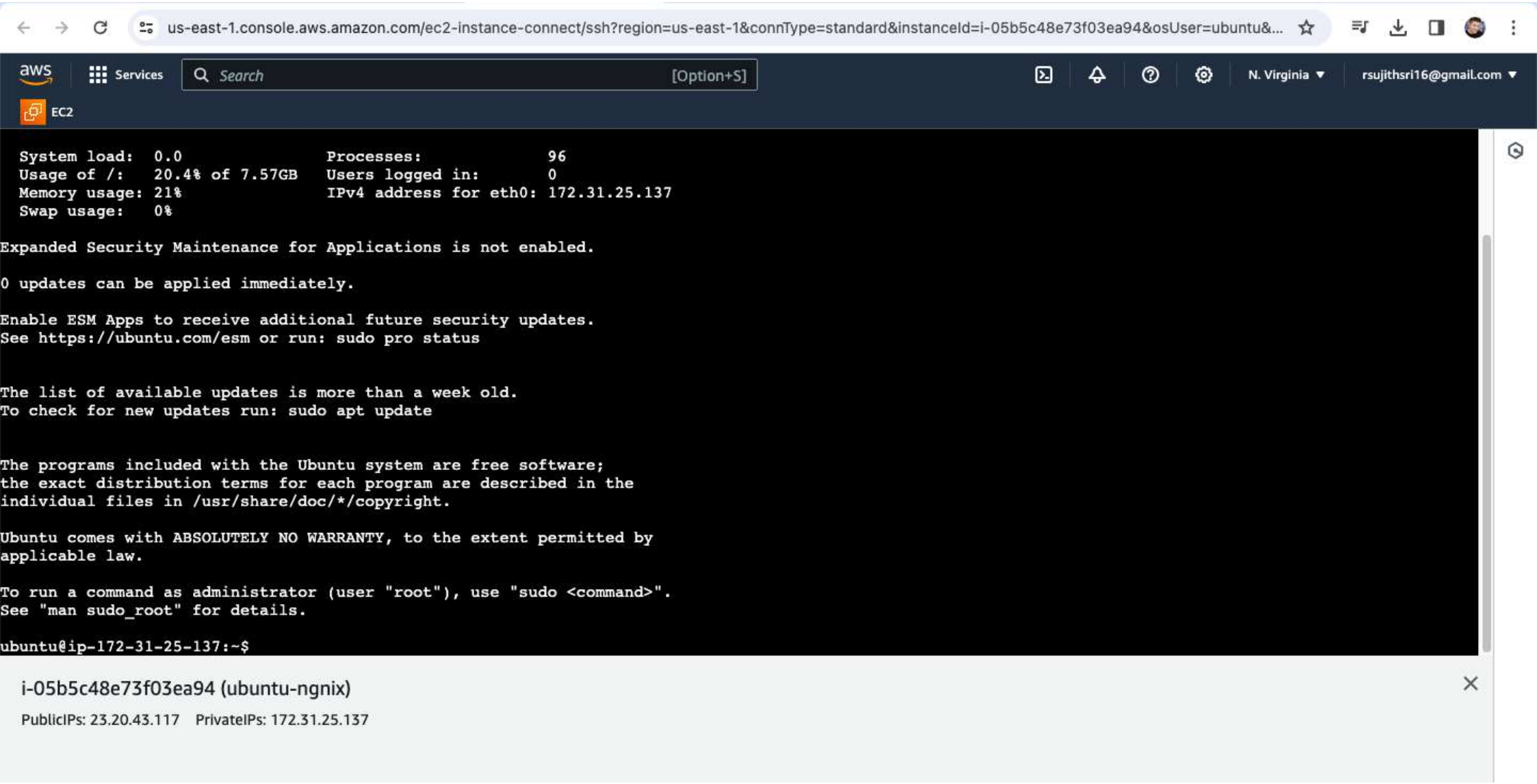

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0ee8e18601e60f9b9
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Connect to instance Info
Connect to your instance i-0ee8e18601e60f9b9 (ubuntu-apache2) using any of these options
EC2 Instance Connect
Session Manager
SSH client
EC2 serial console
Instance ID
i-0ee8e18601e60f9b9 (ubuntu-apache2)
Connection Type
Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.
Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.
Public IP address
54.227.70.190
Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.
ubuntu
Note: In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

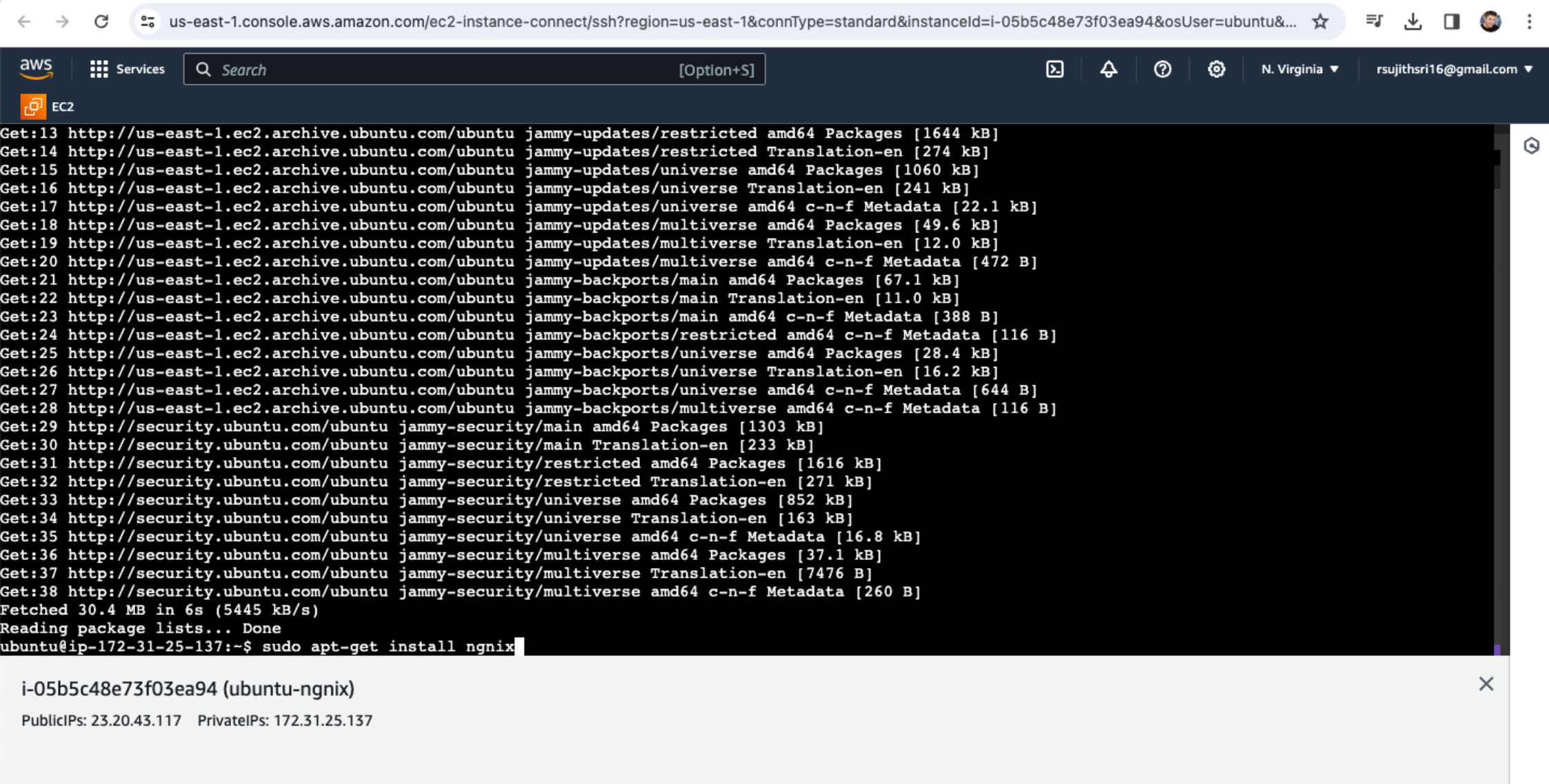

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0ee8e18601e60f9b9&osUser=ubuntu&region=us-east-1&s...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
System load: 0.0 Processes: 96
Usage of /: 20.4% of 7.57GB Users logged in: 0
Memory usage: 21% IPv4 address for eth0: 172.31.23.184
Swap usage: 0%
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-23-184:~$
i-0ee8e18601e60f9b9 (ubuntu-apache2)
PublicIPs: 54.227.70.190 PrivateIPs: 172.31.23.184

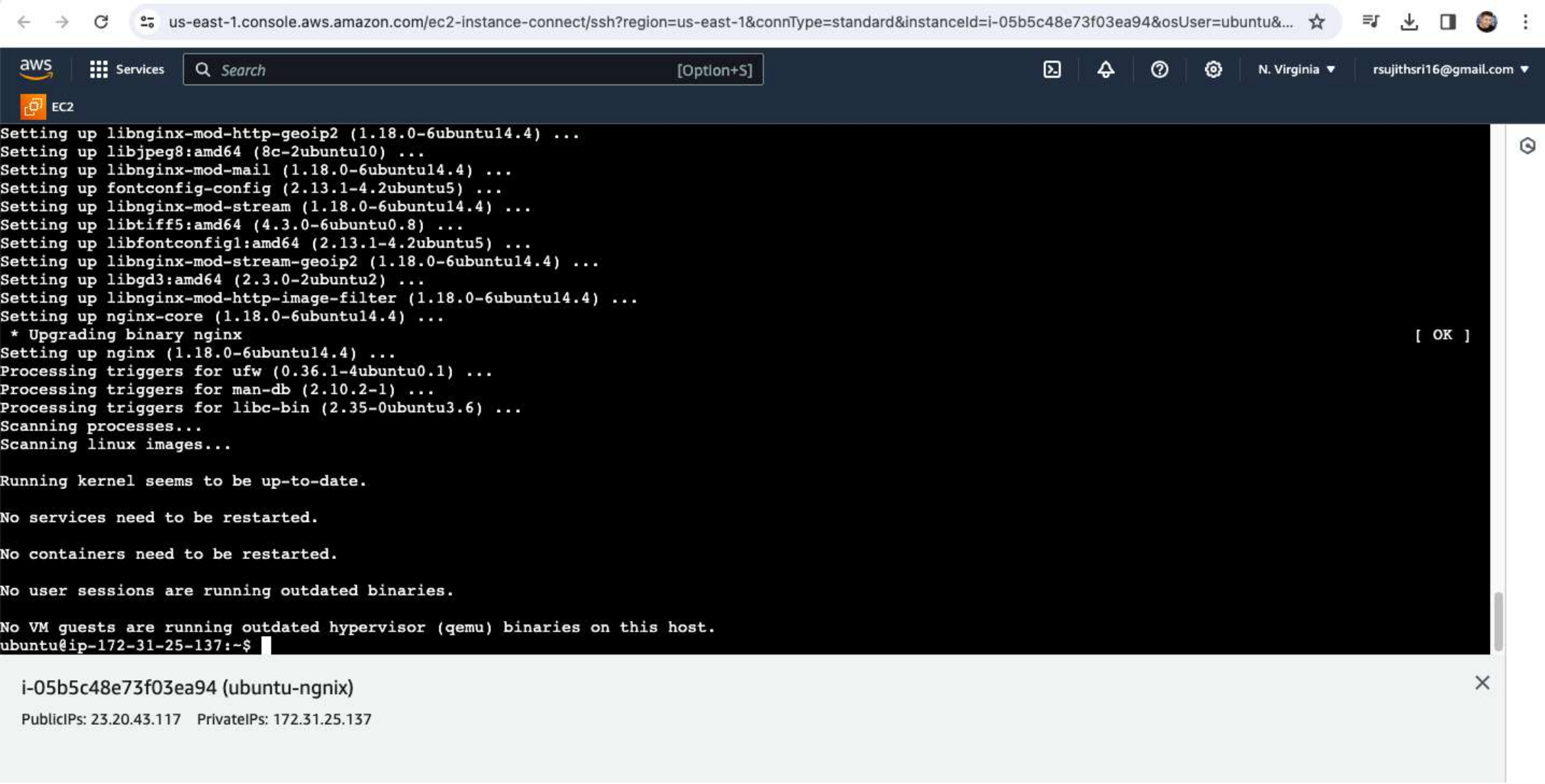

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0ee8e18601e60f9b9&osUser=ubuntu&region=us-east-1&s...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [293 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1644 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [274 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1060 kB]
Get:17 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [233 kB]
Get:18 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1616 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [241 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [22.1 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [49.6 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [12.0 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [472 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.1 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.0 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.4 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.2 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [644 B]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [271 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [852 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [163 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.1 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7476 B]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 30.4 MB in 6s (5488 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-23-184:~$ sudo apt-get install apache2
i-0ee8e18601e60f9b9 (ubuntu-apache2)
PublicIPs: 54.227.70.190 PrivateIPs: 172.31.23.184

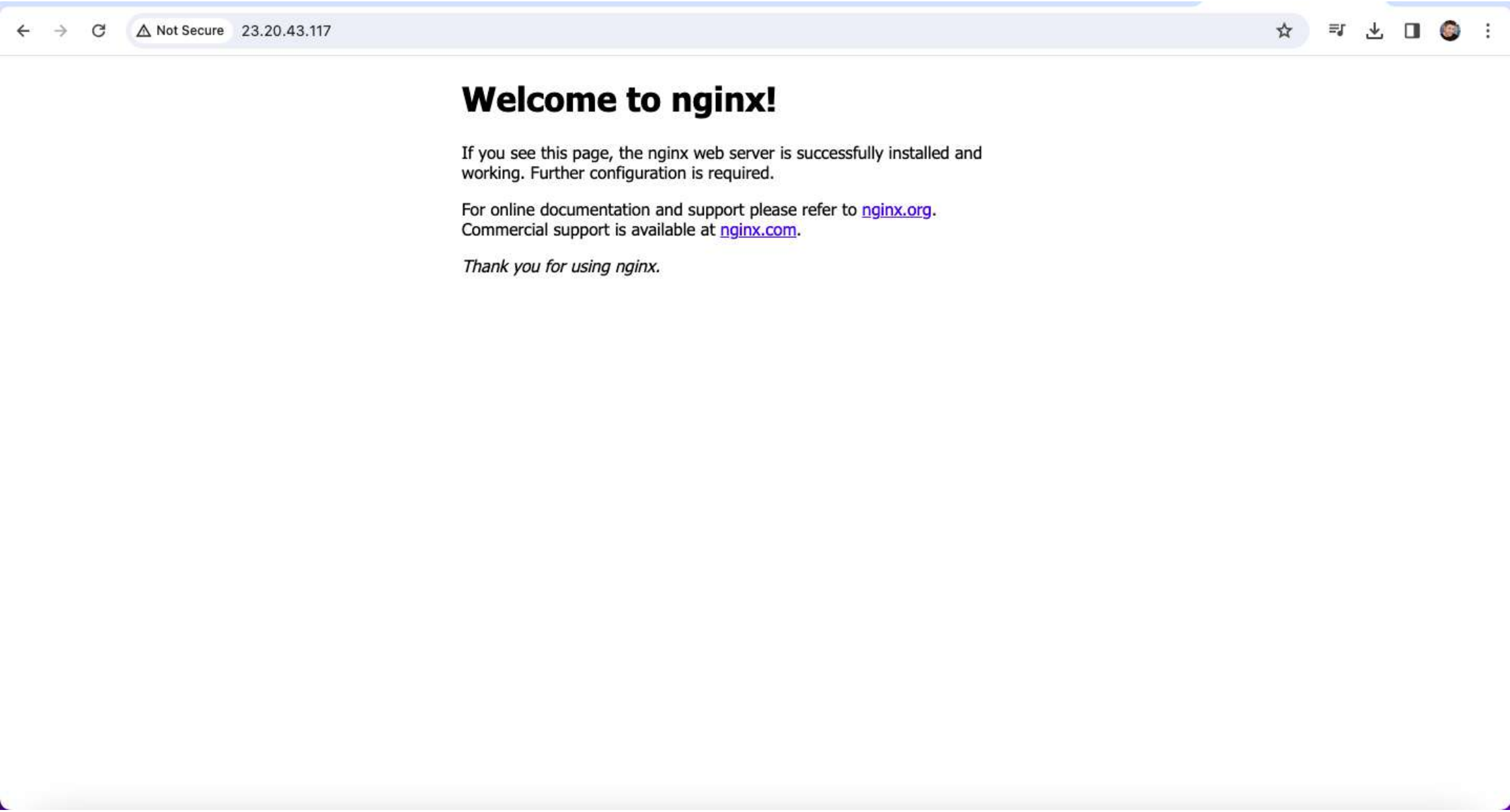

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0ee8e18601e60f9b9&osUser=ubuntu&region=us-east-1&s...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.6) ...
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-23-184:~$
i-0ee8e18601e60f9b9 (ubuntu-apache2)
PublicIPs: 54.227.70.190 PrivateIPs: 172.31.23.184
`-- *.conf

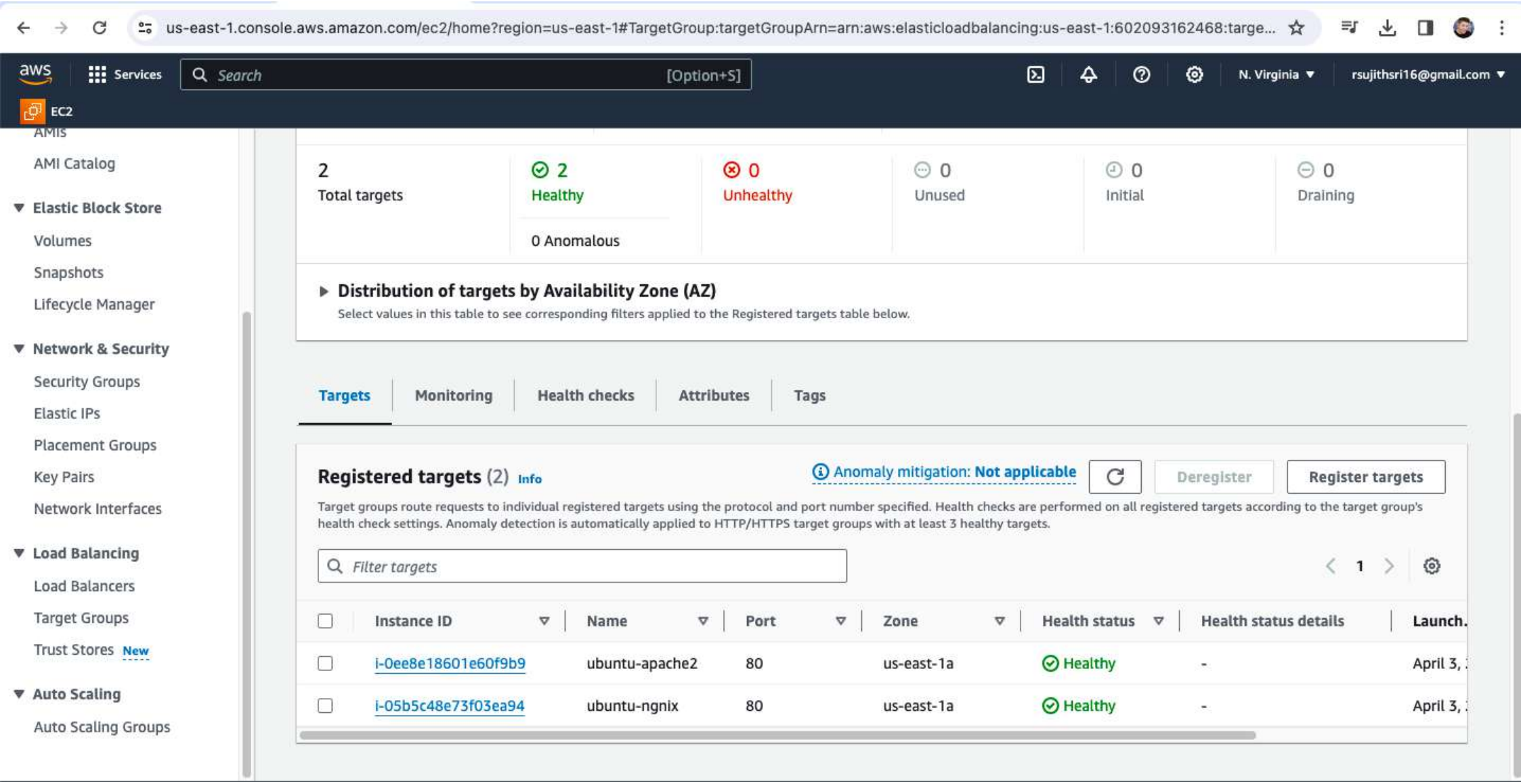

Not Secure
54.227.70.190
Ubuntu
Apache2 Default Page
It works!
This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should replace this file (located at /var/www/html/index.html) before continuing to operate your HTTP server.
If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.
Configuration Overview
Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is fully documented in /usr/share/doc/apache2/README.Debian.gz. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the manual if the apache2-doc package was installed on this server.
The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:
/etc/apache2/
|-- apache2.conf
| `-- ports.conf
|-- mods-enabled
| |-- *.load
| `-- *.conf
|-- conf-enabled
| `-- *.conf
|-- sites-enabled
| `-- *.conf


us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-05b5c48e73f03ea94&osUser=ubuntu&...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
System load: 0.0 Processes: 96
Usage of /: 20.4% of 7.57GB Users logged in: 0
Memory usage: 21% IPv4 address for eth0: 172.31.25.137
Swap usage: 0%
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-25-137:~$
i-05b5c48e73f03ea94 (ubuntu-ngnix)
PublicIPs: 23.20.43.117 PrivateIPs: 172.31.25.137


us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-05b5c48e73f03ea94&osUser=ubuntu&...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1644 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [274 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1060 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [241 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [22.1 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [49.6 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [12.0 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [472 B]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.1 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.0 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.4 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.2 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [644 B]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1303 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [233 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1616 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [271 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [852 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [163 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.1 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7476 B]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 30.4 MB in 6s (5445 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-25-137:~$ sudo apt-get install ngnix
i-05b5c48e73f03ea94 (ubuntu-ngnix)
PublicIPs: 23.20.43.117 PrivateIPs: 172.31.25.137


us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-05b5c48e73f03ea94&osUser=ubuntu&...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
Setting up libnginx-mod-http-geoip2 (1.18.0-6ubuntu14.4) ...
Setting up libjpeg8:amd64 (8c-2ubuntu10) ...
Setting up libnginx-mod-mail (1.18.0-6ubuntu14.4) ...
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream (1.18.0-6ubuntu14.4) ...
Setting up libtiff5:amd64 (4.3.0-6ubuntu0.8) ...
Setting up libfontconfig1:amd64 (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream-geoip2 (1.18.0-6ubuntu14.4) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up libnginx-mod-http-image-filter (1.18.0-6ubuntu14.4) ...
Setting up nginx-core (1.18.0-6ubuntu14.4) ...
* Upgrading binary nginx
[OK]
Setting up nginx (1.18.0-6ubuntu14.4) ...
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.6) ...
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-25-137:~$
i-05b5c48e73f03ea94 (ubuntu-ngnix)
PublicIPs: 23.20.43.117 PrivateIPs: 172.31.25.137


Not Secure
23.20.43.117
Welcome to nginx!
If you see this page, the nginx web server is successfully installed and working. Further configuration is required.
For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.
Thank you for using nginx.


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:602093162468:targe...
aws
Services
Search
[Option+S]
N. Virginia
rsujithsri16@gmail.com
EC2
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores New
Auto Scaling
Auto Scaling Groups
2
Total targets
2
Healthy
0 Anomalous
0
Unhealthy
0
Unused
0
Initial
0
Draining
Distribution of targets by Availability Zone (AZ)
Select values in this table to see corresponding filters applied to the Registered targets table below.
Targets
Monitoring
Health checks
Attributes
Tags
Registered targets (2) Info
Anomaly mitigation: Not applicable
Deregister
Register targets
Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.
Filter targets
1
Instance ID
Name
Port
Zone
Health status
Health status details
Launch.
i-0ee8e18601e60f9b9
ubuntu-apache2
80
us-east-1a
Healthy
-
April 3,
i-05b5c48e73f03ea94
ubuntu-ngnix
80
us-east-1a
Healthy
-
April 3,


Not Secure
application-loadbalancer-382195659.us-east-1.elb.amazonaws.com
Reload this page
Apache2 Default Page
Ubuntu
It works!
This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should replace this file (located at /var/www/html/index.html) before continuing to operate your HTTP server.
If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.
Configuration Overview
Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is fully documented in /usr/share/doc/apache2/README.Debian.gz. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the manual if the apache2-doc package was installed on this server.
The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:
/etc/apache2/
|-- apache2.conf
| `-- ports.conf
|-- mods-enabled
| |-- *.load
| `-- *.conf
|-- conf-enabled
| `-- *.conf
|-- sites-enabled
| `-- *.conf

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.