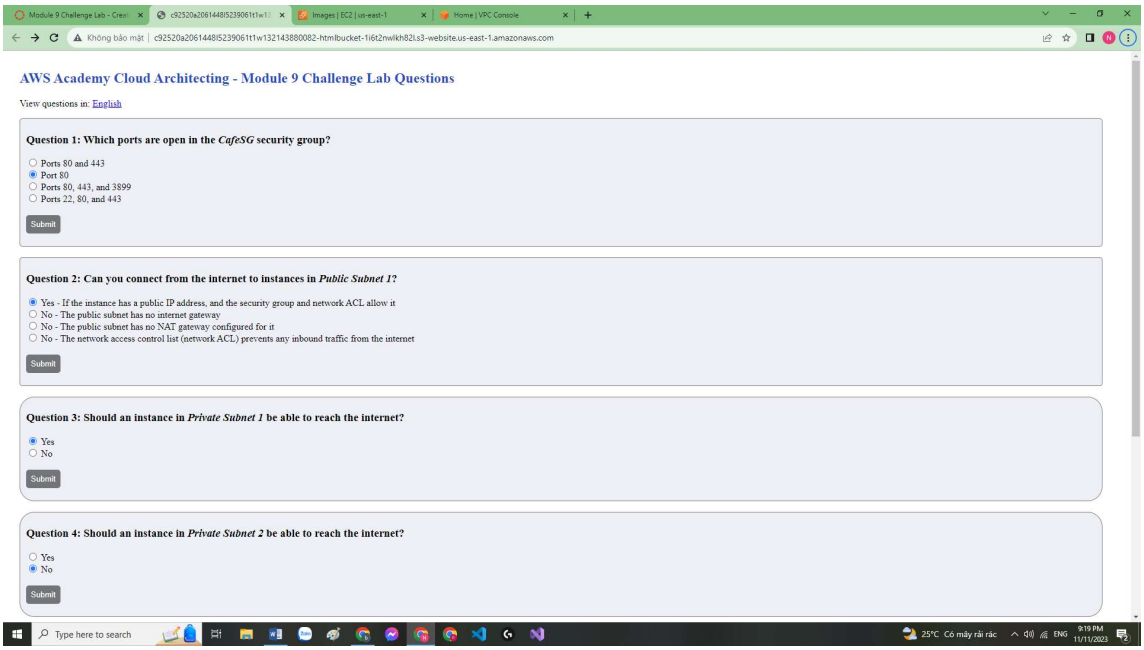
Task 1:



AWS Academy Cloud Architecting - Module 9 Challenge Lab Questions

View questions in: English

Question 1: Which ports are open in the *CafeSG* security group?

- Ports 80 and 443
- Port 80
- Ports 80, 443, and 3899
- Ports 22, 80, and 443

Submit

Question 2: Can you connect from the internet to instances in *Public Subnet 1*?

- Yes - If the instance has a public IP address, and the security group and network ACL allow it
- No - The public subnet has no internet gateway
- No - The public subnet has no NAT gateway configured for it
- No - The network access control list (network ACL) prevents any inbound traffic from the internet

Submit

Question 3: Should an instance in *Private Subnet 1* be able to reach the internet?

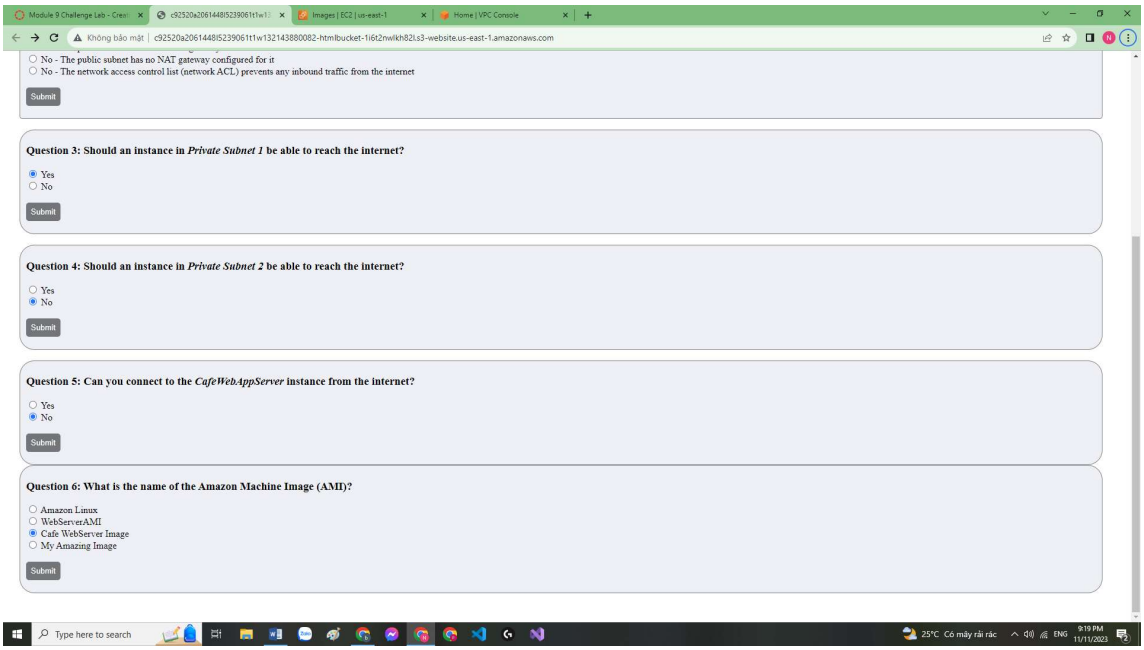
- Yes
- No

Submit

Question 4: Should an instance in *Private Subnet 2* be able to reach the internet?

- Yes
- No

Submit



- No - The public subnet has no NAT gateway configured for it
- No - The network access control list (network ACL) prevents any inbound traffic from the internet

Submit

Question 3: Should an instance in *Private Subnet 1* be able to reach the internet?

- Yes
- No

Submit

Question 4: Should an instance in *Private Subnet 2* be able to reach the internet?

- Yes
- No

Submit

Question 5: Can you connect to the *CafeWebAppServer* instance from the internet?

- Yes
- No

Submit

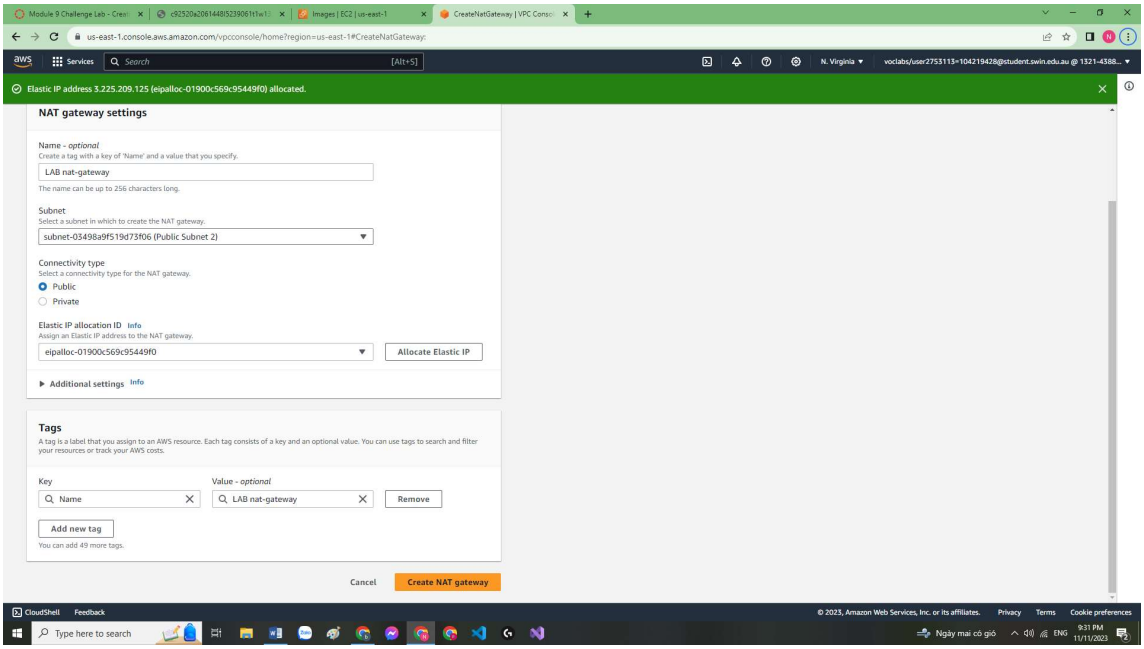
Question 6: What is the name of the Amazon Machine Image (AMI)?

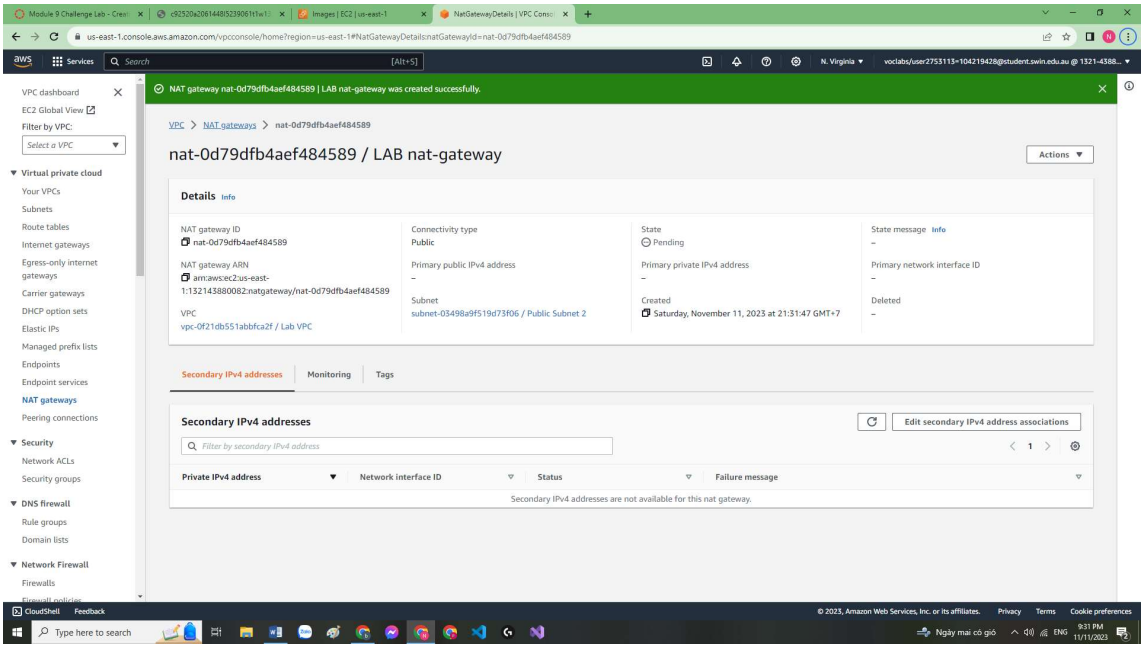
- Amazon Linux
- WebServerAMI
- Cafe WebServer Image
- My Amazing Image

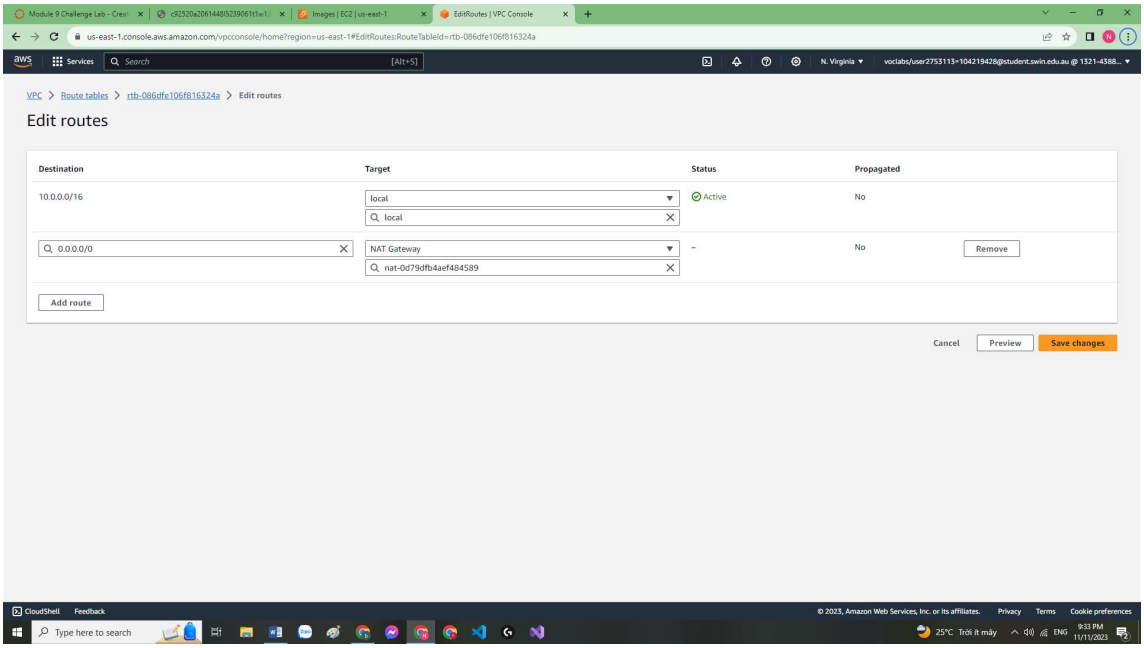
Submit

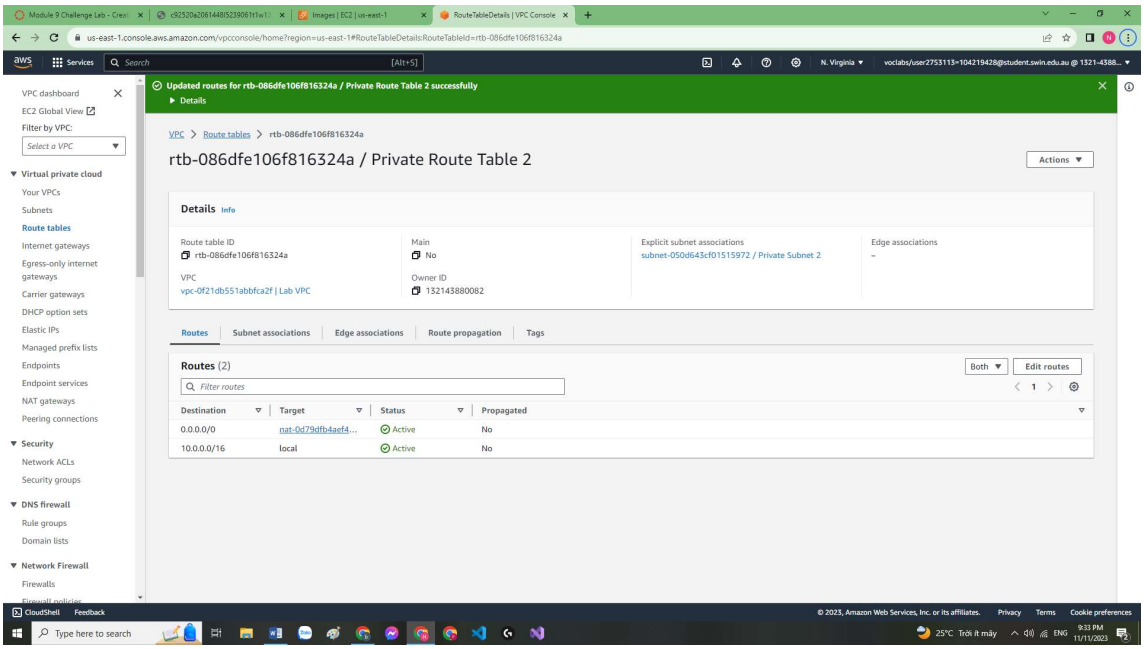
Task 2:

Step 1: create NAT gateway

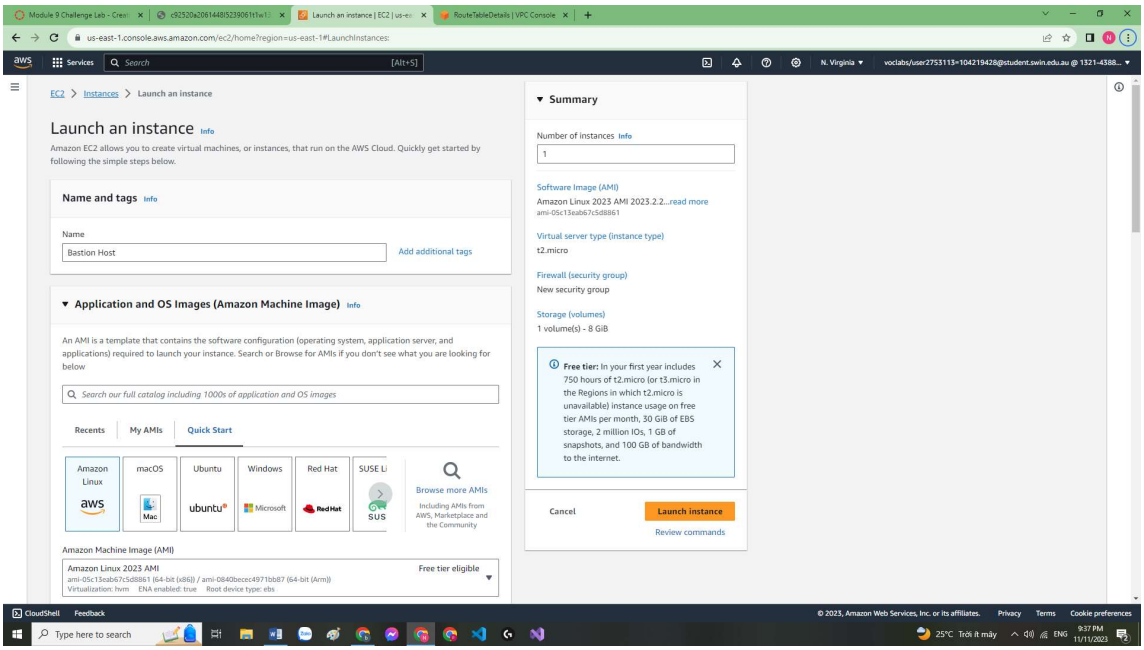


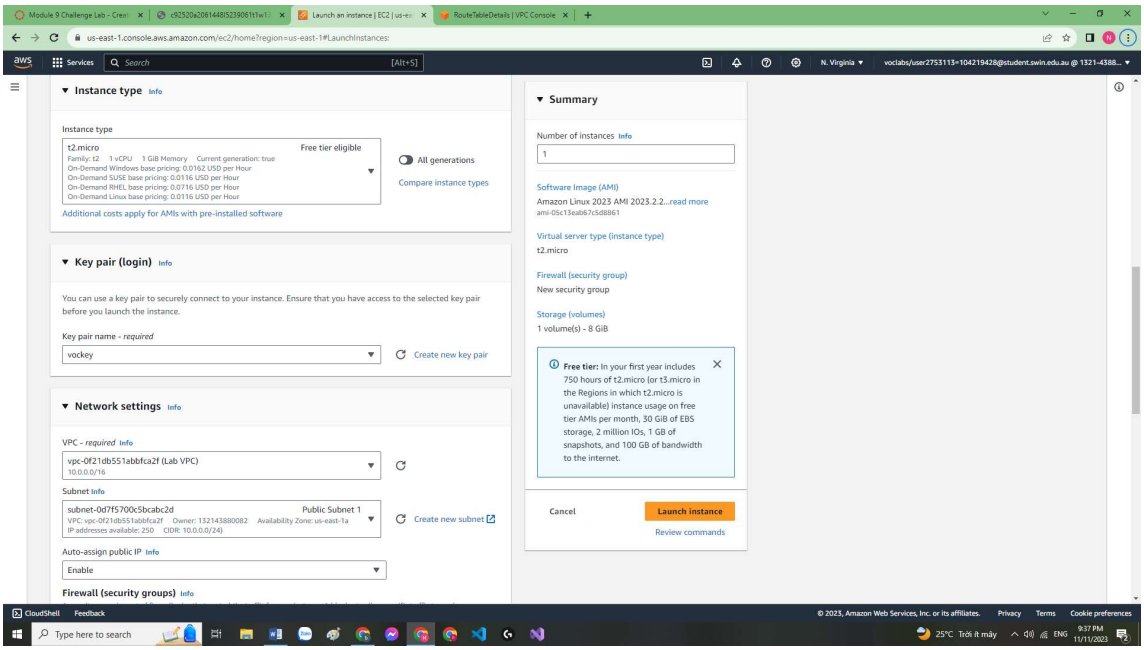


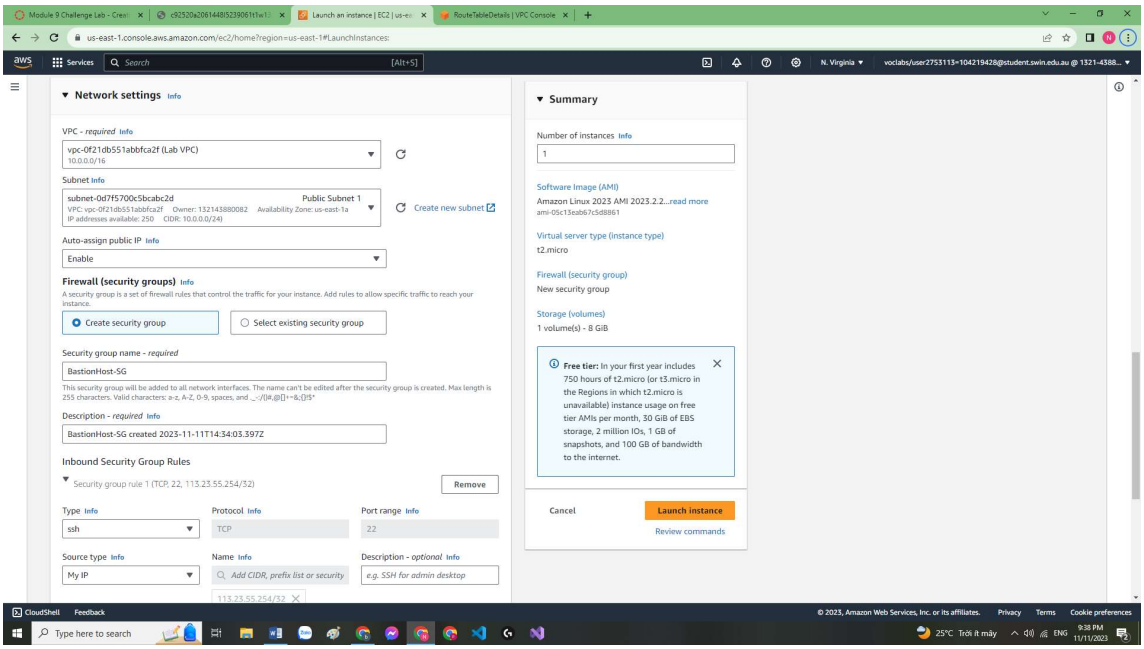

Edit routes
Destination
Target
Status
Propagated
10.0.0.0/16
local
Active
No
0.0.0.0/0
NAT Gateway
nat-0d79dfb4aef484589
No
Remove
Add route
Cancel
Preview
Save changes


Updated routes for rtb-086dfe106f816324a / Private Route Table 2 successfully
rtb-086dfe106f816324a / Private Route Table 2
Actions
Details
Routes
Subnet associations
Edge associations
Route propagation
Tags
Routes (2)
Destination
Target
Status
Propagated
0.0.0.0/0
Active
No
10.0.0.0/16
local
Active
No

Step 2: create EC2






Network settings Info
VPC - required Info
vpc-0f21db551abbfca2f (Lab VPC)
10.0.0.0/16
Subnet Info
subnet-0d7f5700c5bcabc2d
Public Subnet 1
Create new subnet
Auto-assign public IP Info
Enable
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
BastionHost-SG
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
BastionHost-SG created 2023-11-11T14:34:03.397Z
Inbound Security Group Rules
Security group rule 1 (TCP, 22, 113.23.55.254/32)
Remove
Type Info
ssh
Protocol Info
TCP
Port range Info
22
Source type Info
My IP
Name Info
Add CIDR, prefix list or security
Description - optional Info
e.g. SSH for admin desktop
113.23.55.254/32
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2023 AMI 2023.2.2...read more
ami-05c13eab67c5d8861
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Launch instance
Review commands
CloudShell
Feedback
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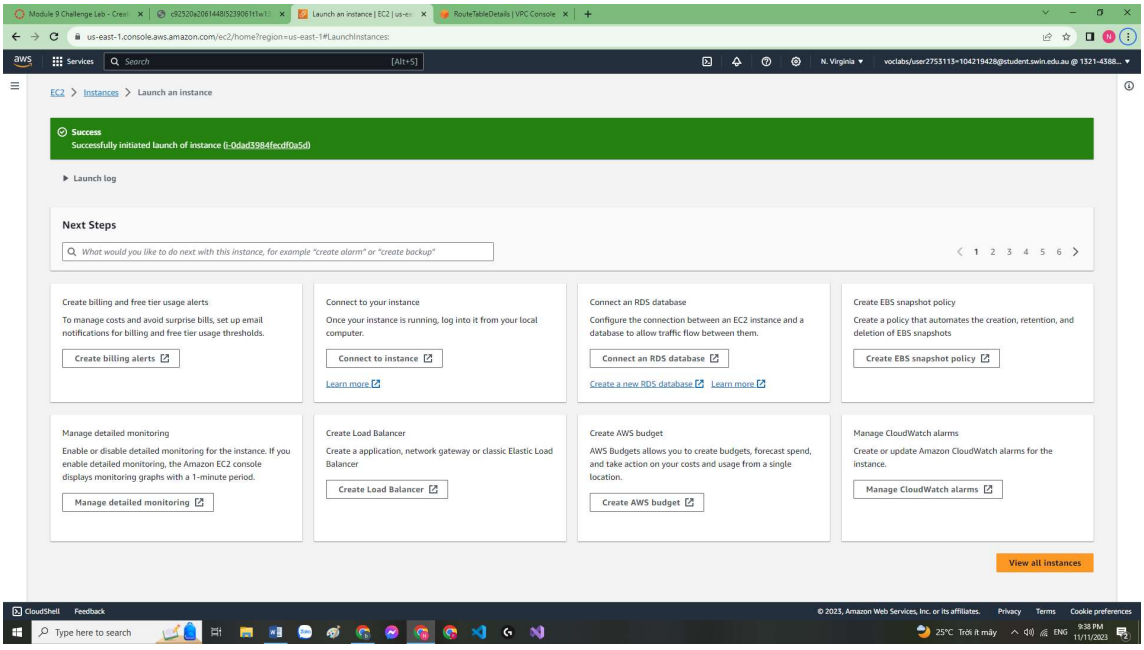
EC2 > Instances > Launch an instance
Success
Successfully initiated launch of instance (i-0dad3984fecdf0a5d)
Launch log
Next Steps
What would you like to do next with this instance, for example "create alarm" or "create backup"
Create billing and free tier usage alerts
To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.
Create billing alerts
Connect to your instance
Once your instance is running, log into it from your local computer.
Connect to instance
Learn more
Connect an RDS database
Configure the connection between an EC2 instance and a database to allow traffic flow between them.
Connect an RDS database
Create a new RDS database
Learn more
Create EBS snapshot policy
Create a policy that automates the creation, retention, and deletion of EBS snapshots
Create EBS snapshot policy
Manage detailed monitoring
Enable or disable detailed monitoring for the instance. If you enable detailed monitoring, the Amazon EC2 console displays monitoring graphs with a 1-minute period.
Manage detailed monitoring
Create Load Balancer
Create a application, network gateway or classic Elastic Load Balancer
Create Load Balancer
Create AWS budget
AWS Budgets allows you to create budgets, forecast spend, and take action on your costs and usage from a single location.
Create AWS budget
Manage CloudWatch alarms
Create or update Amazon CloudWatch alarms for the instance.
Manage CloudWatch alarms
View all instances
CloudShell
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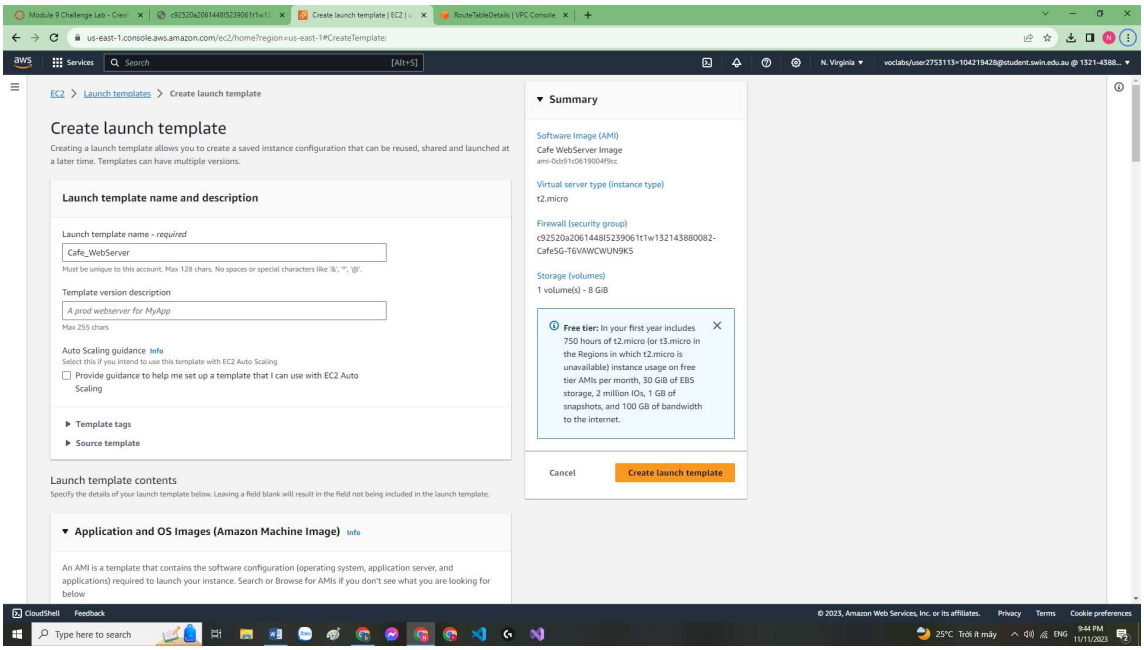
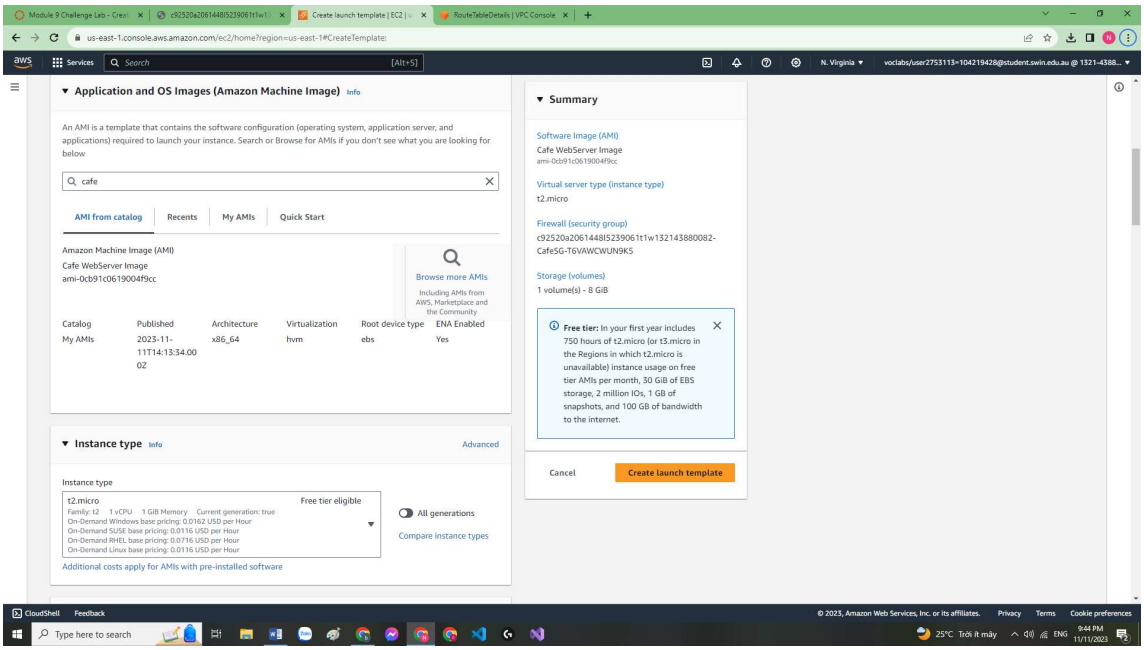
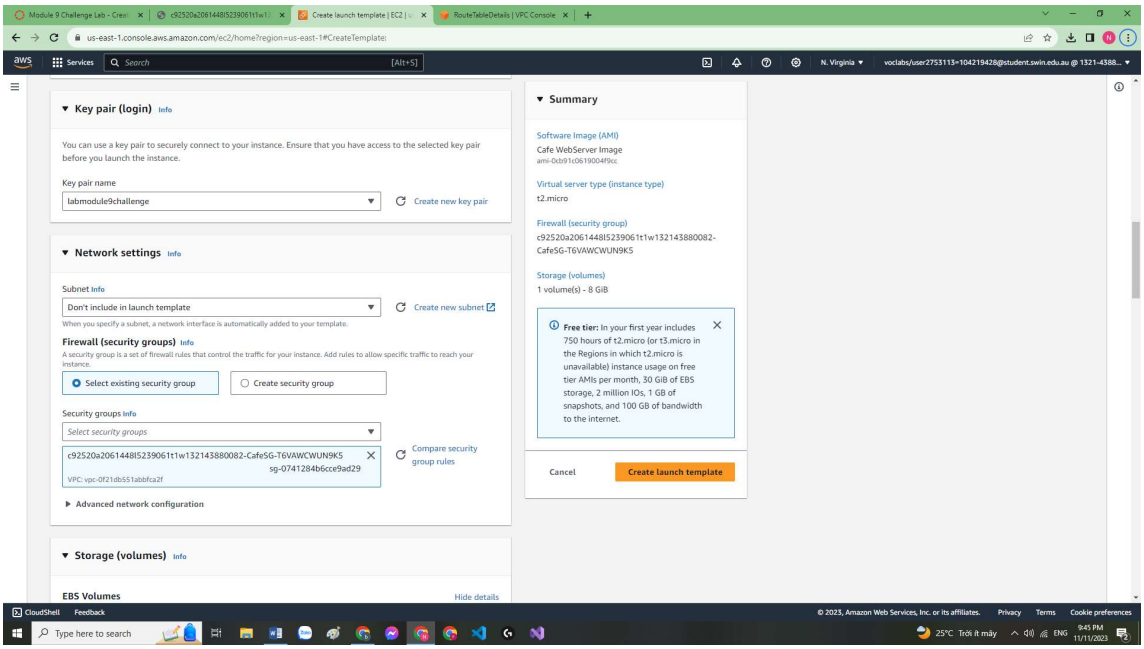
Step 3: create launch template






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
labmodule9challenge
Create new key pair
Network settings Info
Subnet Info
Don't include in launch template
Create new subnet
When you specify a subnet, a network interface is automatically added to your template.
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.
Select existing security group
Create security group
Security groups Info
Select security groups
c92520a2061448l5239061t1w132143880082-CafeSG-T6VAWCWUN9K5
sg-0741284b6cce9ad29
VPC: vpc-0f21db551abbfca2f
Compare security group rules
Advanced network configuration
Storage (volumes) Info
EBS Volumes
Hide details
Summary
Software Image (AMI)
Cafe WebServer Image
ami-0cb91c0619004f9cc
Virtual server type (instance type)
t2.micro
Firewall (security group)
c92520a2061448l5239061t1w132143880082-CafeSG-T6VAWCWUN9K5
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Create launch template
CloudShell
Feedback
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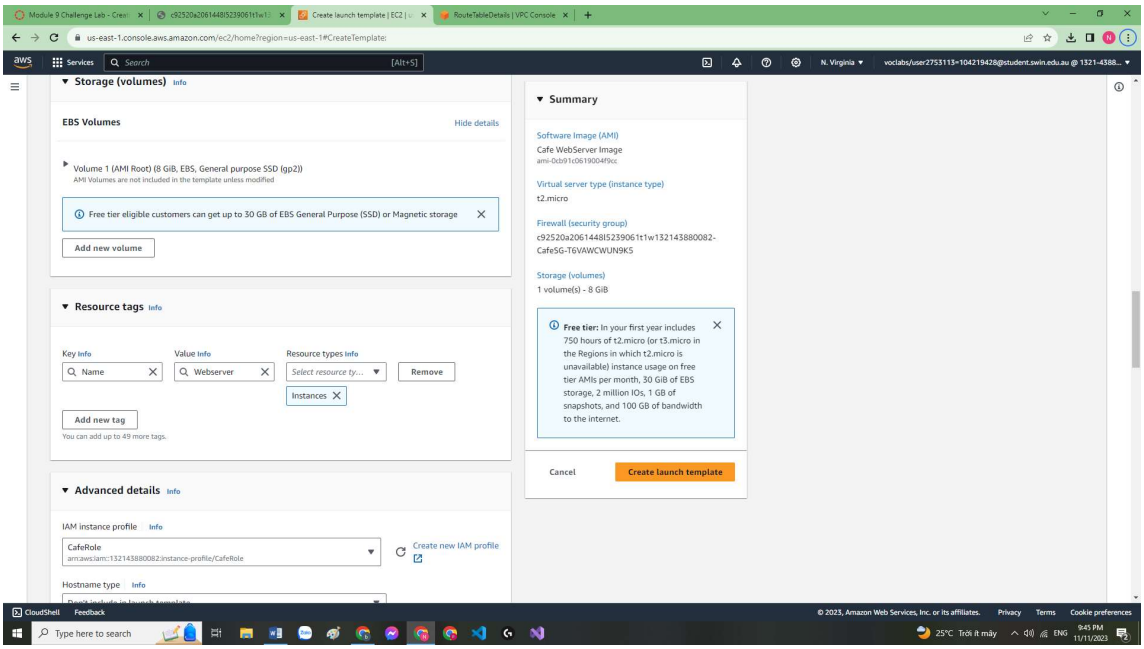
Storage (volumes) Info
EBS Volumes
Hide details
Volume 1 (AMI Root) (8 GiB, EBS, General purpose SSD (gp2))
AMI Volumes are not included in the template unless modified
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage
Add new volume
Resource tags Info
Key Info
Value Info
Resource types Info
Name
Webserver
Select resource ty...
Instances
Remove
Add new tag
You can add up to 49 more tags.
Advanced details Info
IAM instance profile Info
CafeRole
arn:aws:iam::132143880082:instance-profile/CafeRole
Create new IAM profile
Hostname type Info
Summary
Software Image (AMI)
Cafe WebServer Image
ami-0cb91c0619004f9cc
Virtual server type (instance type)
t2.micro
Firewall (security group)
c92520a2061448l5239061t1w132143880082-CafeSG-T6VAWCWUN9K5
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Create launch template
CloudShell
Feedback
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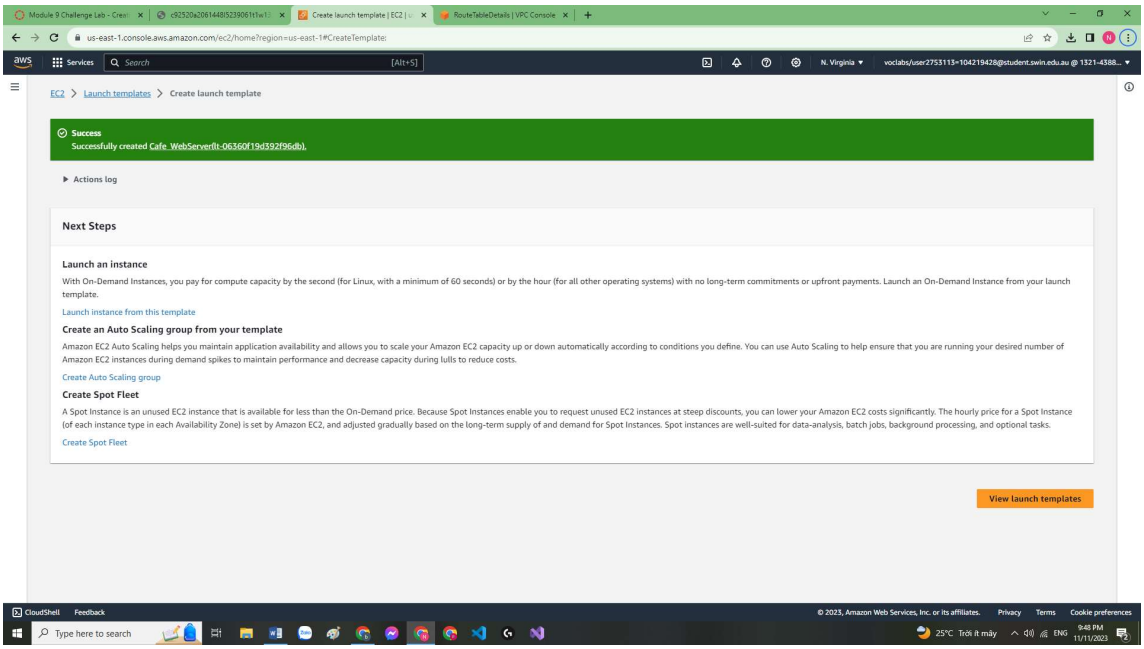
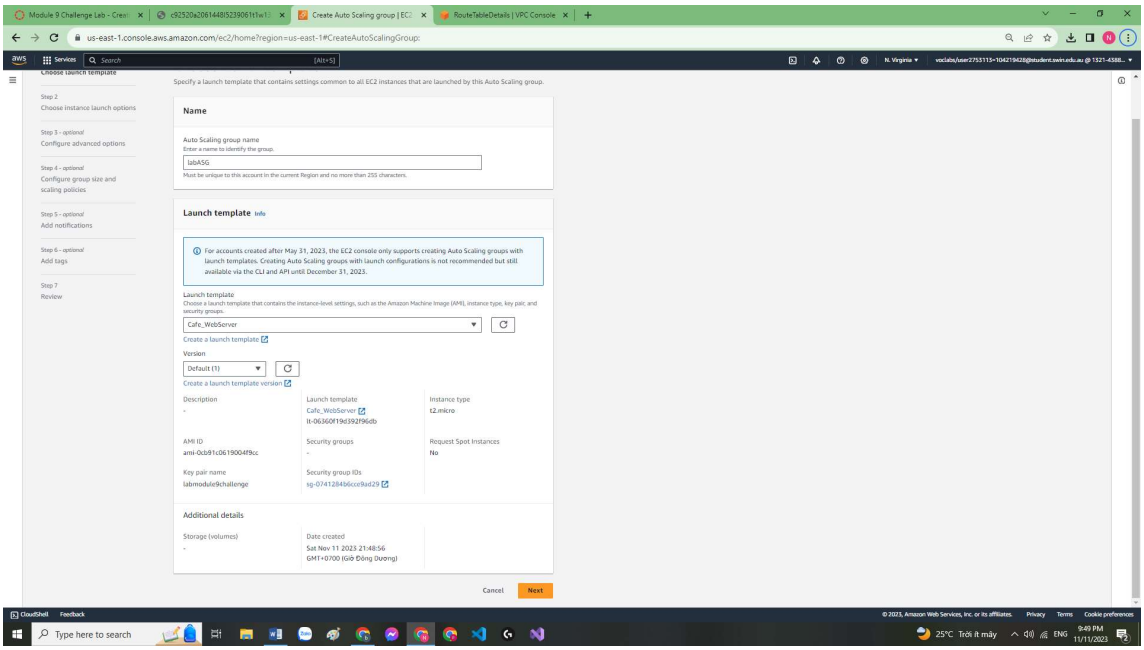
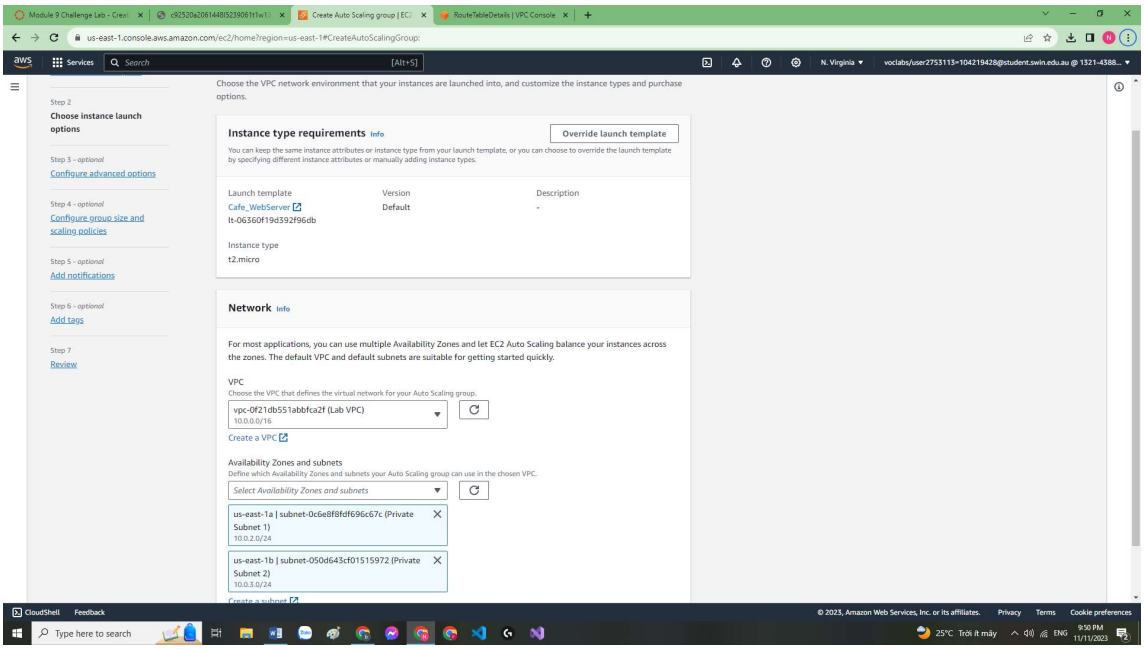


Step 4; create auto scaling group




Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.
Step 2
Choose instance launch options
Step 3 - optional
Configure advanced options
Step 4 - optional
Configure group size and scaling policies
Step 5 - optional
Add notifications
Step 6 - optional
Add tags
Step 7
Review
Instance type requirements Info
Override launch template
You can keep the same instance attributes or instance type from your launch template, or you can choose to override the launch template by specifying different instance attributes or manually adding instance types.
Launch template
Cafe_WebServer
lt-06360f19d392f96db
Version
Default
Description
-
Instance type
t2.micro
Network Info
For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.
VPC
Choose the VPC that defines the virtual network for your Auto Scaling group.
vpc-0f21db551abbfca2f (Lab VPC)
10.0.0.0/16
Create a VPC
Availability Zones and subnets
Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.
Select Availability Zones and subnets
us-east-1a | subnet-0c6e8f8fdf696c67c (Private Subnet 1)
10.0.2.0/24
us-east-1b | subnet-050d643cf01515972 (Private Subnet 2)
10.0.3.0/24
Create a subnet
CloudShell
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ENG
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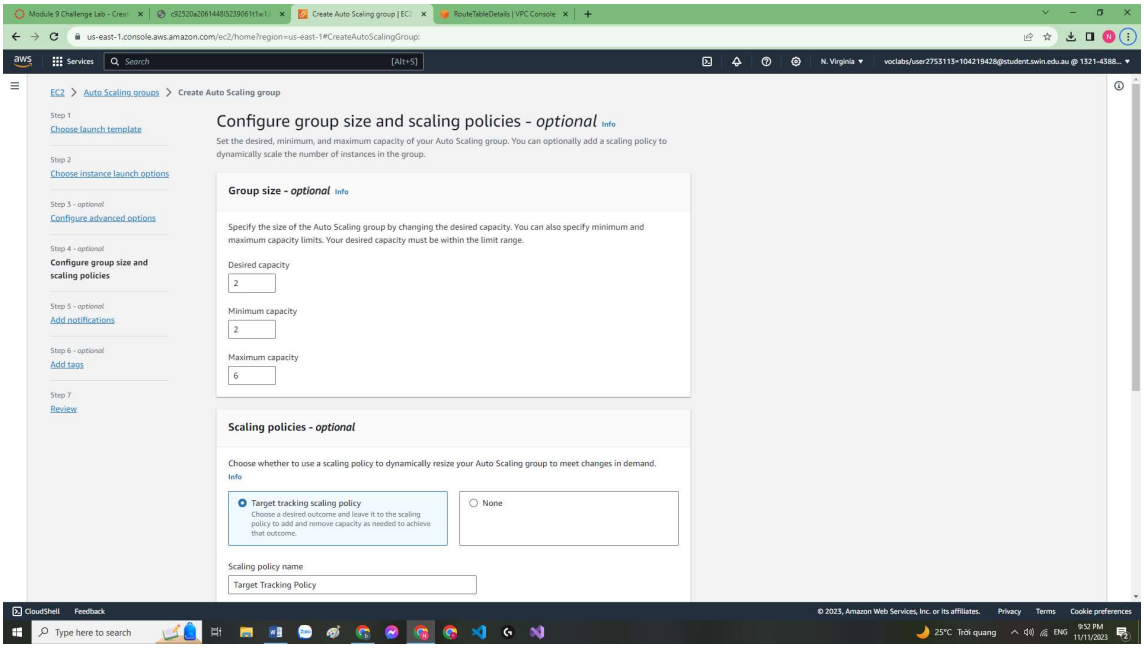
11/11/2023


EC2 > Auto Scaling groups > Create Auto Scaling group
Step 1
Choose launch template
Step 2
Choose instance launch options
Step 3 - optional
Configure advanced options
Step 4 - optional
Configure group size and scaling policies
Step 5 - optional
Add notifications
Step 6 - optional
Add tags
Step 7
Review
Configure group size and scaling policies - optional Info
Set the desired, minimum, and maximum capacity of your Auto Scaling group. You can optionally add a scaling policy to dynamically scale the number of instances in the group.
Group size - optional Info
Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.
Desired capacity
2
Minimum capacity
2
Maximum capacity
6
Scaling policies - optional
Choose whether to use a scaling policy to dynamically resize your Auto Scaling group to meet changes in demand.
Info
Target tracking scaling policy
Choose a desired outcome and leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.
None
Scaling policy name
Target Tracking Policy
CloudShell
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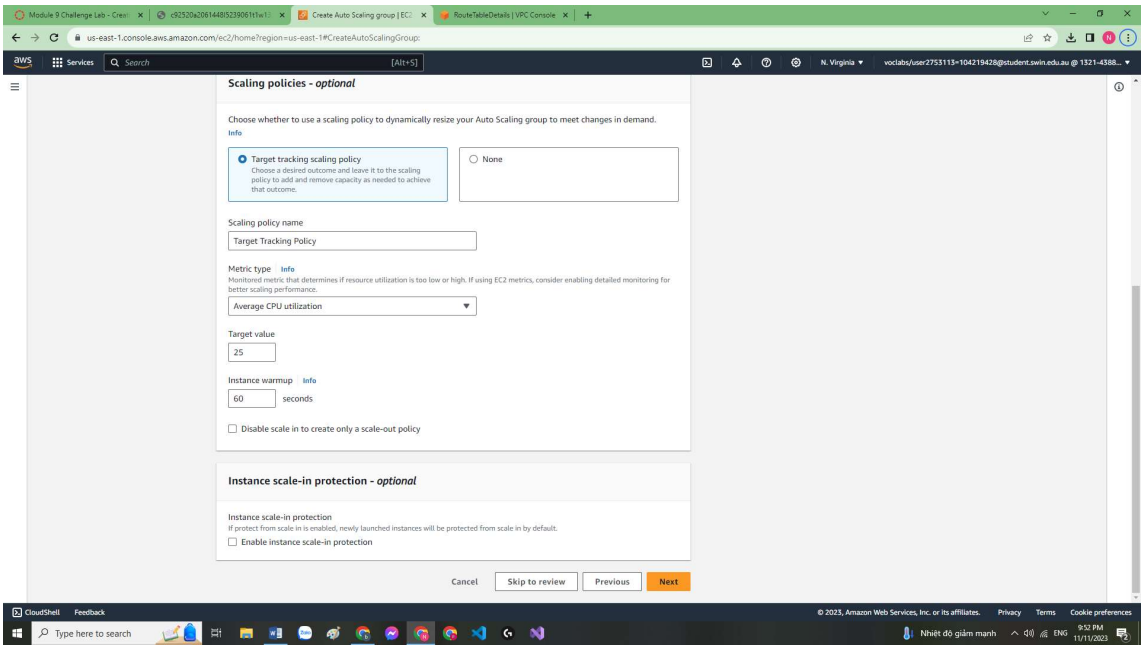
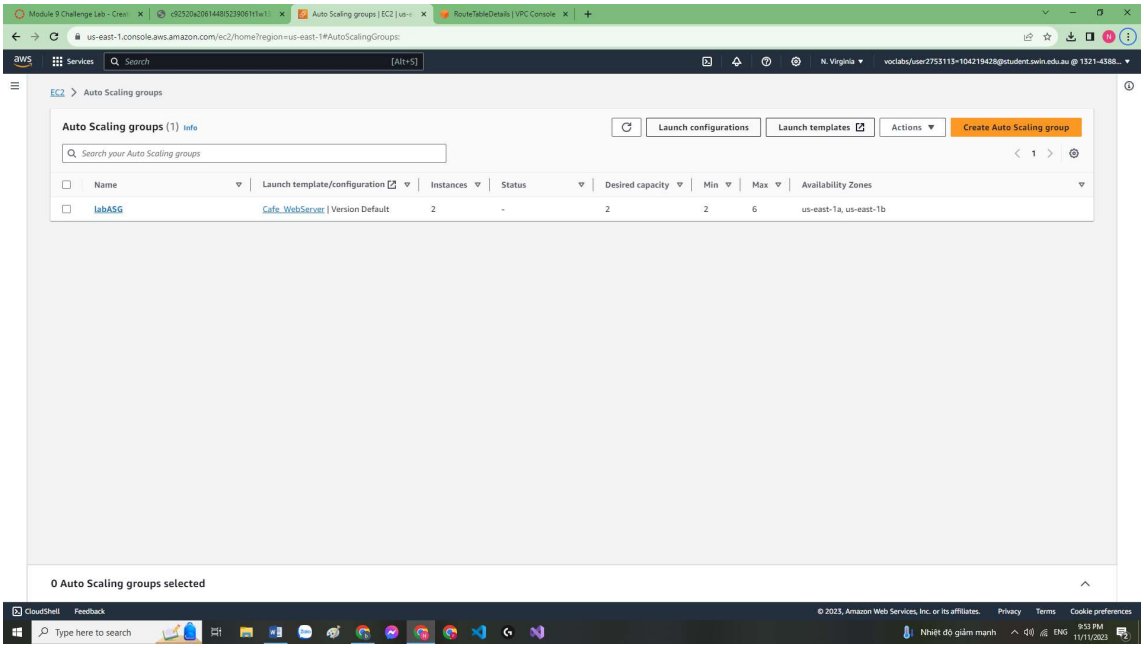
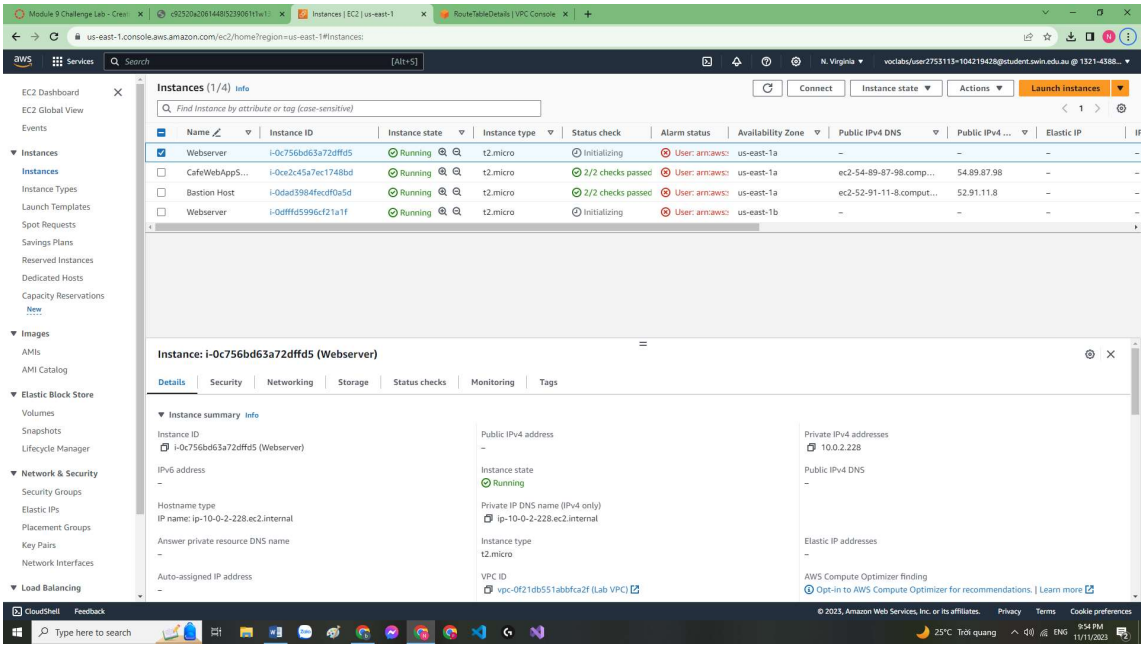
11/11/2023

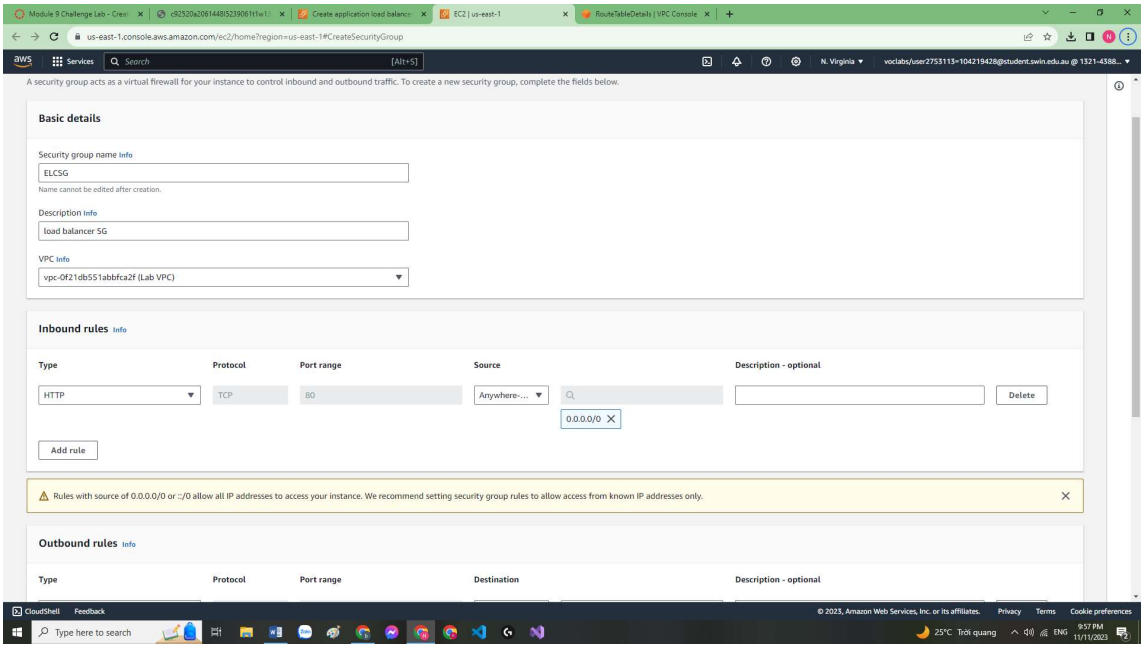

Scaling policies - optional
Choose whether to use a scaling policy to dynamically resize your Auto Scaling group to meet changes in demand.
Info
Target tracking scaling policy
Choose a desired outcome and leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.
None
Scaling policy name
Target Tracking Policy
Metric type Info
Monitored metric that determines if resource utilization is too low or high. If using EC2 metrics, consider enabling detailed monitoring for better scaling performance.
Average CPU utilization
Target value
25
Instance warmup Info
60
seconds
Disable scale in to create only a scale-out policy
Instance scale-in protection - optional
Instance scale-in protection
If protect from scale in is enabled, newly launched instances will be protected from scale in by default.
Enable instance scale-in protection
Cancel
Skip to review
Previous
Next


EC2 > Auto Scaling groups
Auto Scaling groups (1) Info
Launch configurations
Launch templates
Actions
Create Auto Scaling group
Search your Auto Scaling groups
Name
Launch template/configuration
Instances
Status
Desired capacity
Min
Max
Availability Zones
labASG
Cafe_WebServer | Version Default
2
-
2
2
6
us-east-1a, us-east-1b
0 Auto Scaling groups selected

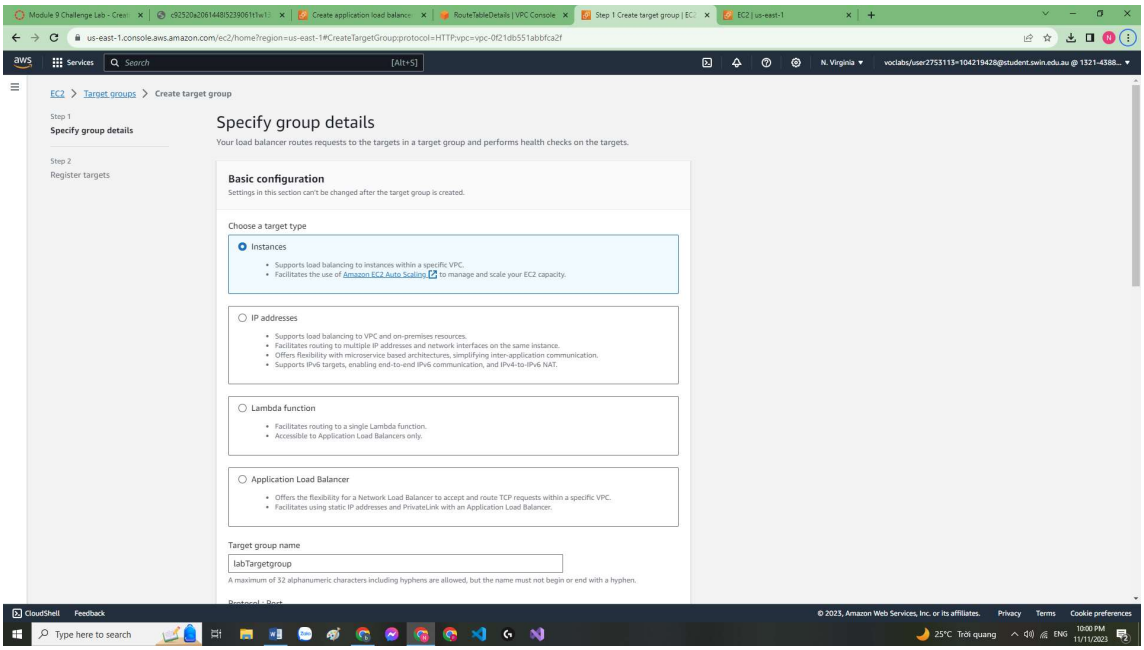


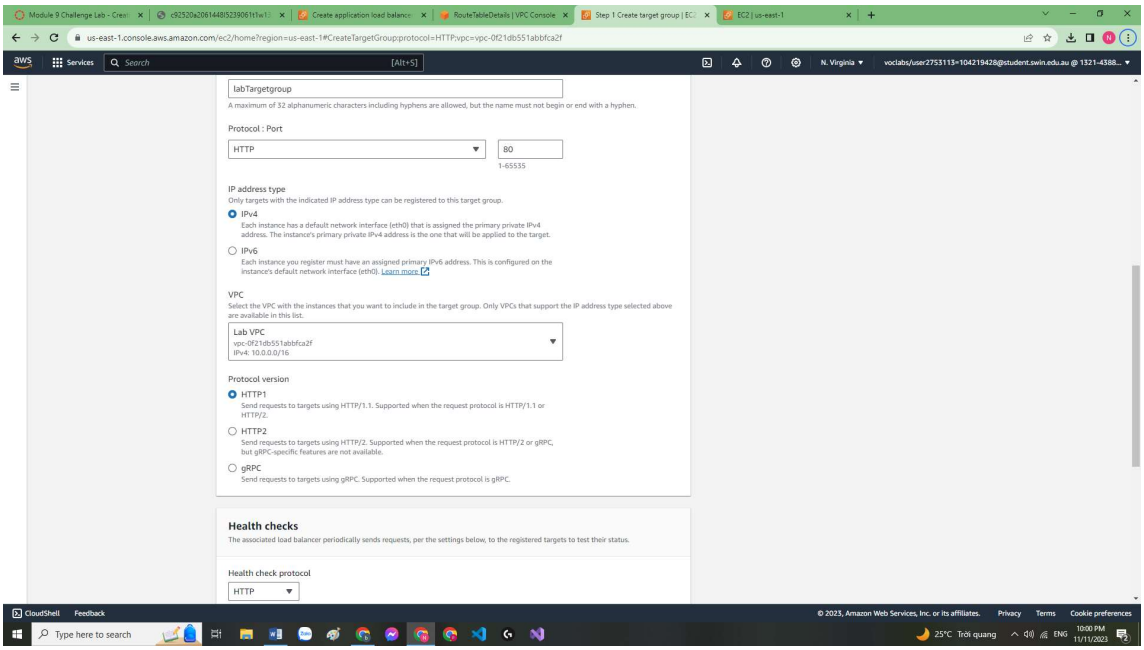
Step 5: Create load balancer

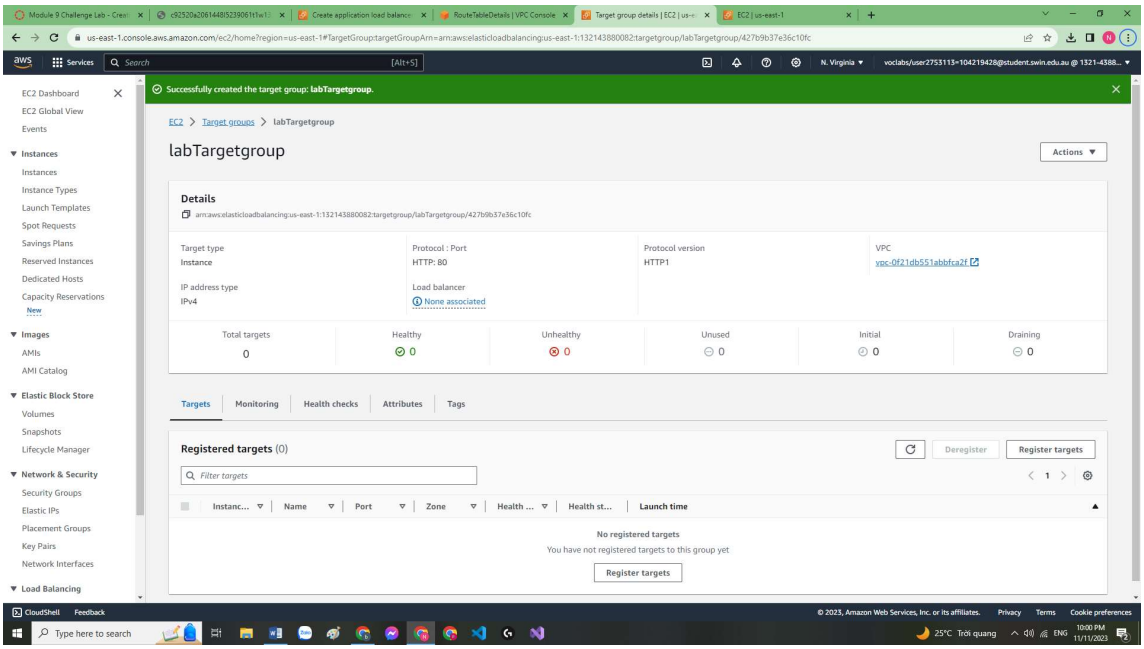
5.1:Security group



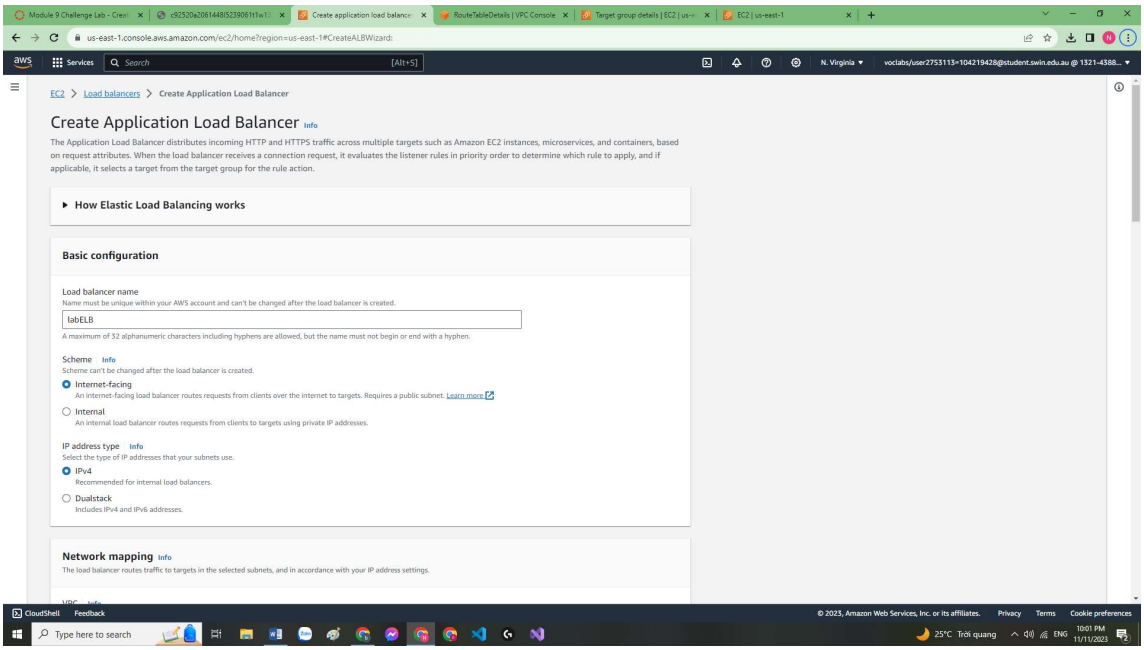
5.2: Target group

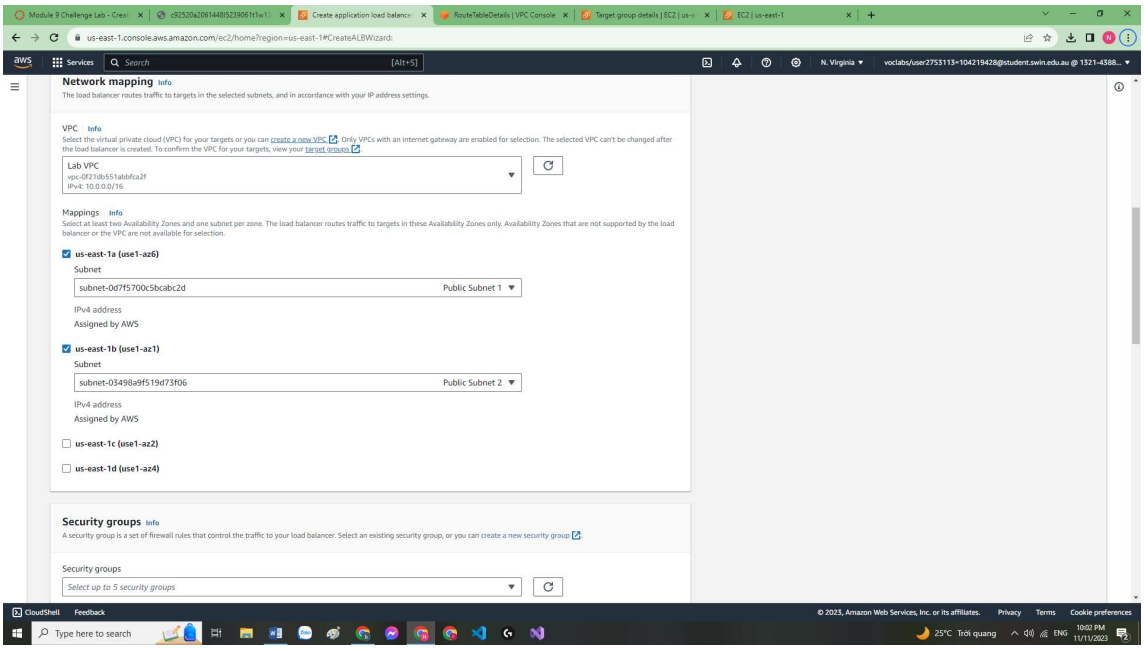






5.3: Load balancer




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.
Lab VPC
vpc-0f21db551abbfca2f
IPv4: 10.0.0.0/16
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-az6)
Subnet
subnet-0d7f5700c5bcabc2d
Public Subnet 1
IPv4 address
Assigned by AWS
us-east-1b (use1-az1)
Subnet
subnet-03498a9f519d73f06
Public Subnet 2
IPv4 address
Assigned by AWS
us-east-1c (use1-az2)
us-east-1d (use1-az4)
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
CloudShell
Feedback
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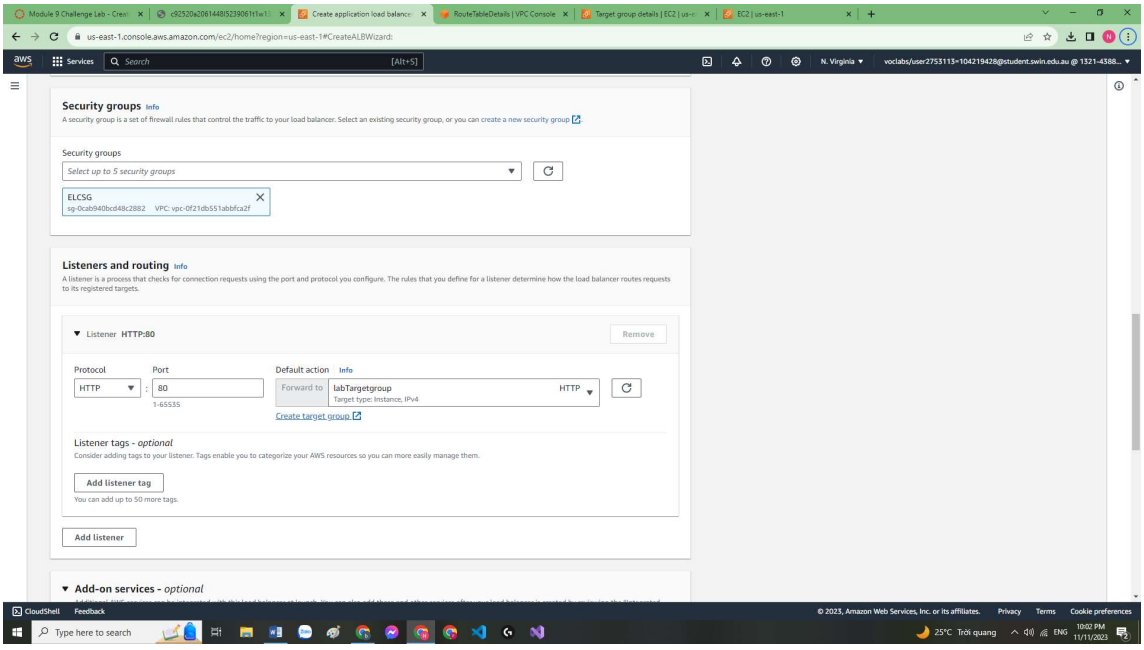
Security groups Info
A security group is a set of firewall rules that control the traffic to your load balancer. Select an existing security group, or you can create a new security group.
Security groups
Select up to 5 security groups
ELCSG
sg-0cab940bcd48c2882 VPC: vpc-0f21db551abbfca2f
Listeners and 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
HTTP
Port
80
1-65535
Default action Info
Forward to
labTargetgroup
Target type: Instance, IPv4
HTTP
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
Add-on services - optional
CloudShell
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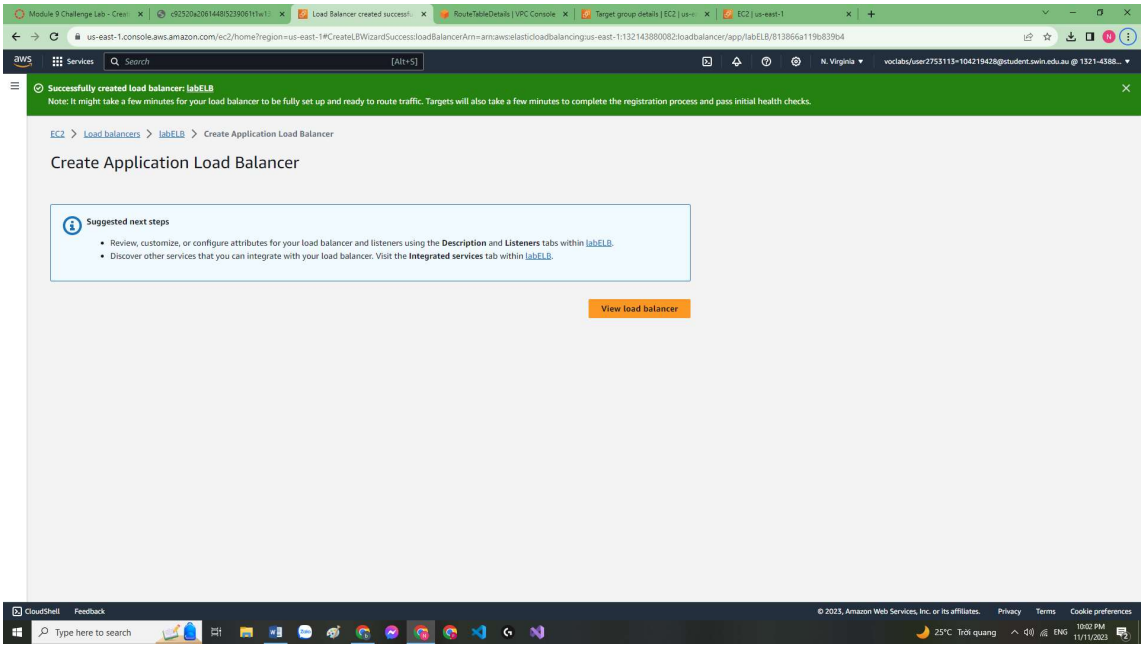
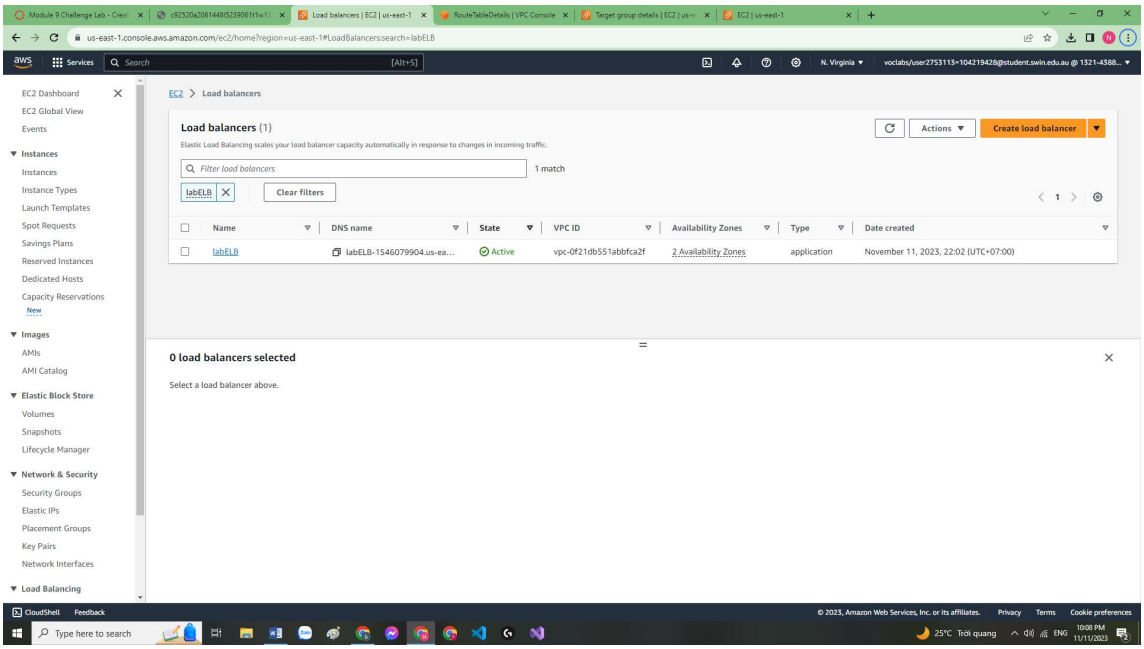
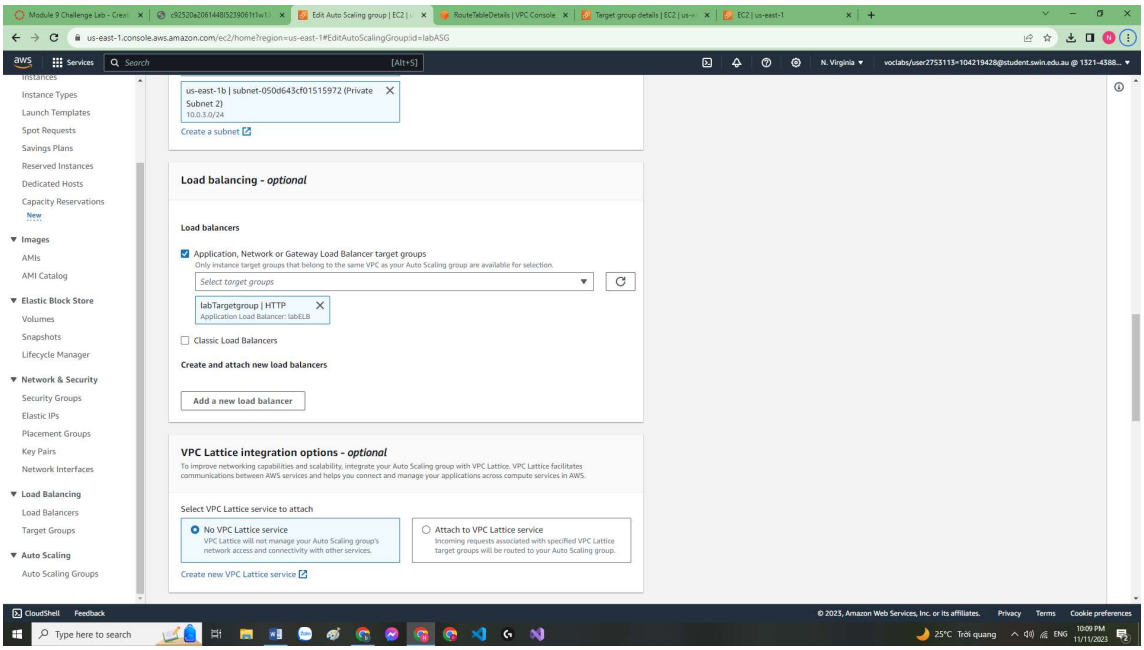
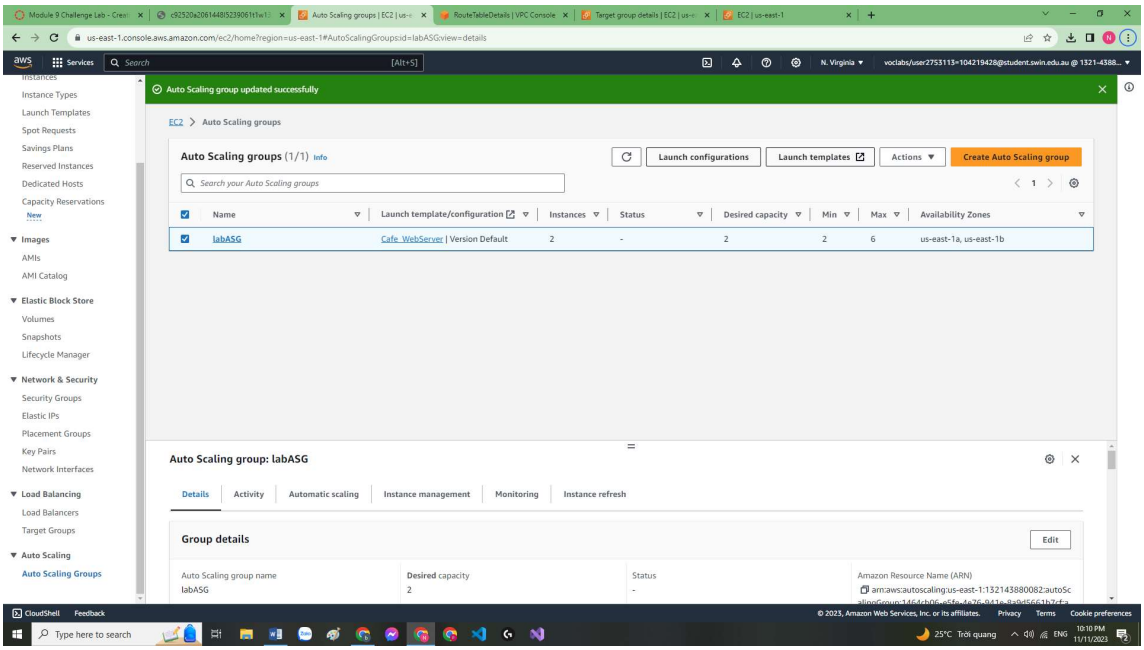
10:02 PM
11/11/2023


Successfully created load balancer: labELB
Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.
EC2 > Load balancers > labELB > Create Application Load Balancer
Create Application Load Balancer
Suggested next steps
Review, customize, or configure attributes for your load balancer and listeners using the Description and Listeners tabs within labELB.
Discover other services that you can integrate with your load balancer. Visit the Integrated services tab within labELB.
View load balancer

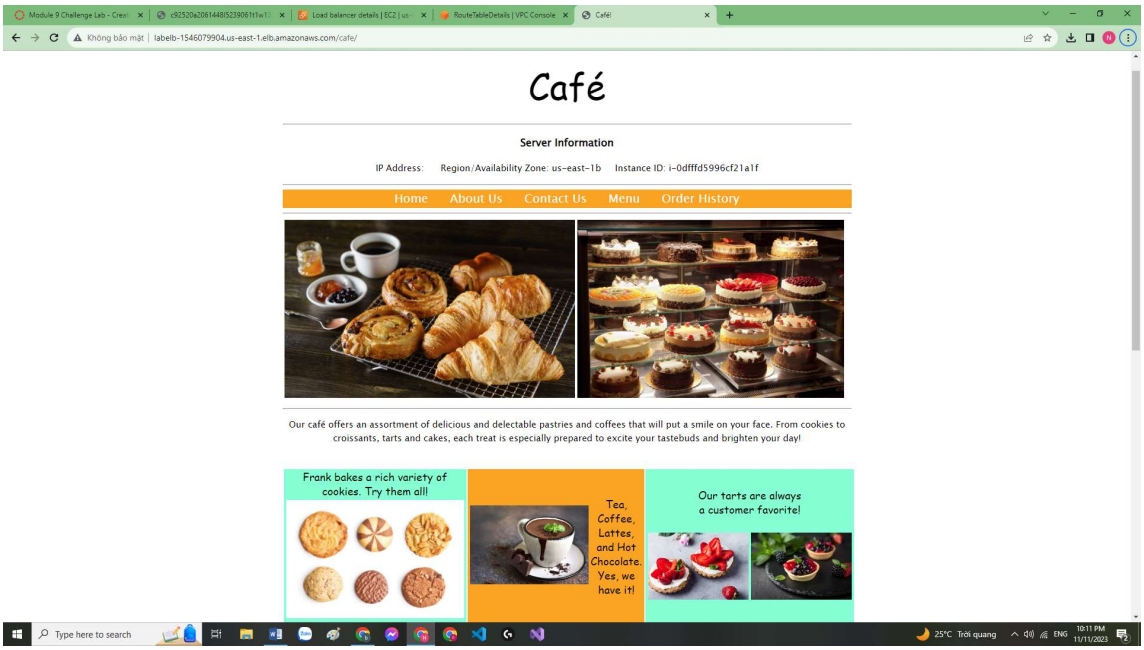

EC2 > Load balancers
Load balancers (1)
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.
Actions
Create load balancer
Filter load balancers
1 match
labELB
Clear filters
Name
DNS name
State
VPC ID
Availability Zones
Type
Date created
labELB
labELB-1546079904.us-ea...
Active
vpc-0f21db551abbfca2f
2 Availability Zones
application
November 11, 2023, 22:02 (UTC+07:00)
0 load balancers selected
Select a load balancer above.

Modify ASG

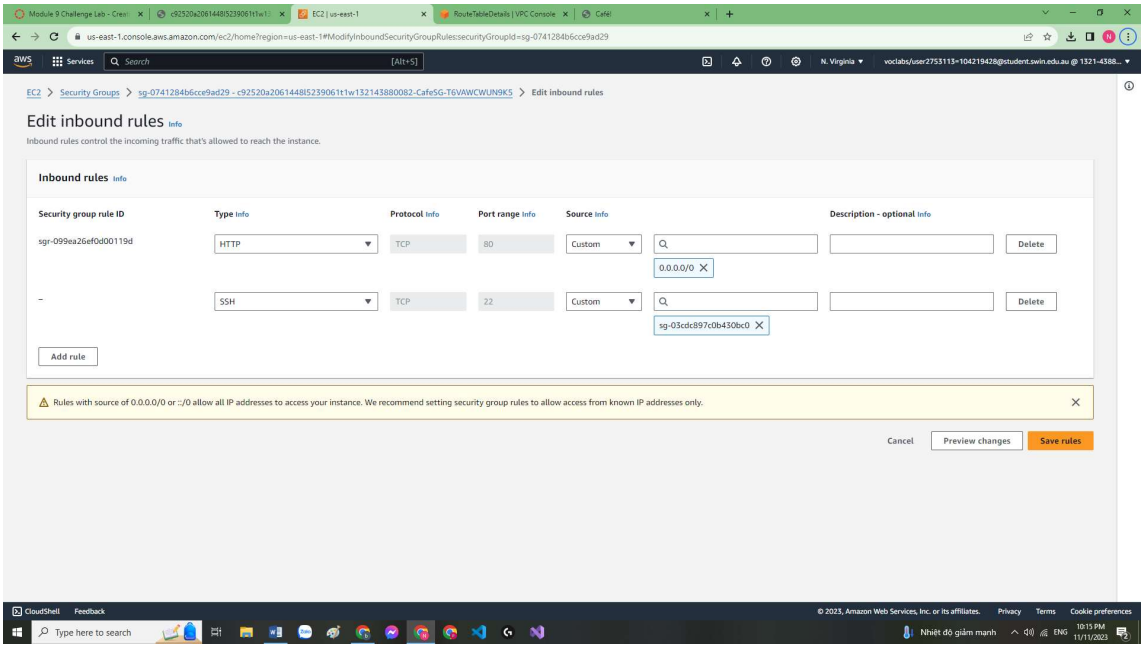

us-east-1b | subnet-050d643cf01515972 (Private Subnet 2)
10.0.3.0/24
Create a subnet
Load balancing - optional
Load balancers
Application, Network or Gateway Load Balancer target groups
Only instance target groups that belong to the same VPC as your Auto Scaling group are available for selection.
Select target groups
labTargetgroup | HTTP
Application Load Balancer: labELB
Classic Load Balancers
Create and attach new load balancers
Add a new load balancer
VPC Lattice integration options - optional
To improve networking capabilities and scalability, integrate your Auto Scaling group with VPC Lattice. VPC Lattice facilitates communications between AWS services and helps you connect and manage your applications across compute services in AWS.
Select VPC Lattice service to attach
No VPC Lattice service
VPC Lattice will not manage your Auto Scaling group's network access and connectivity with other services.
Attach to VPC Lattice service
Incoming requests associated with specified VPC Lattice target groups will be routed to your Auto Scaling group.
Create new VPC Lattice service


Auto Scaling group updated successfully
EC2 > Auto Scaling groups
Auto Scaling groups (1/1) Info
Launch configurations
Launch templates
Actions
Create Auto Scaling group
Search your Auto Scaling groups
Name
Launch template/configuration
Instances
Status
Desired capacity
Min
Max
Availability Zones
labASG
Cafe_WebServer | Version Default
2
-
2
2
6
us-east-1a, us-east-1b
Auto Scaling group: labASG
Details
Activity
Automatic scaling
Instance management
Monitoring
Instance refresh
Group details
Edit
Auto Scaling group name
labASG
Desired capacity
2
Status
-
Amazon Resource Name (ARN)

Step 6: Testing



add rule so we can ssh



After that for some reason I cant ssh because the key got refuse I suspect it was bacause the vockey key the instruction said to use

Still got 100/100 on ACA though