

Swinburne University of Technology

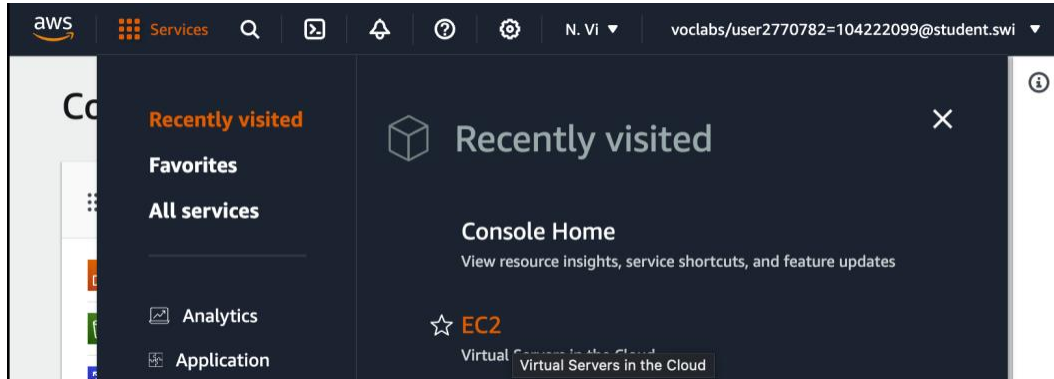
COS20019 Cloud Computing Architecture

Lab 6 - Scale & Load Balance your Architecture

Saturday 21th October, 2023

Task 1: Create an AMI for Auto Scaling

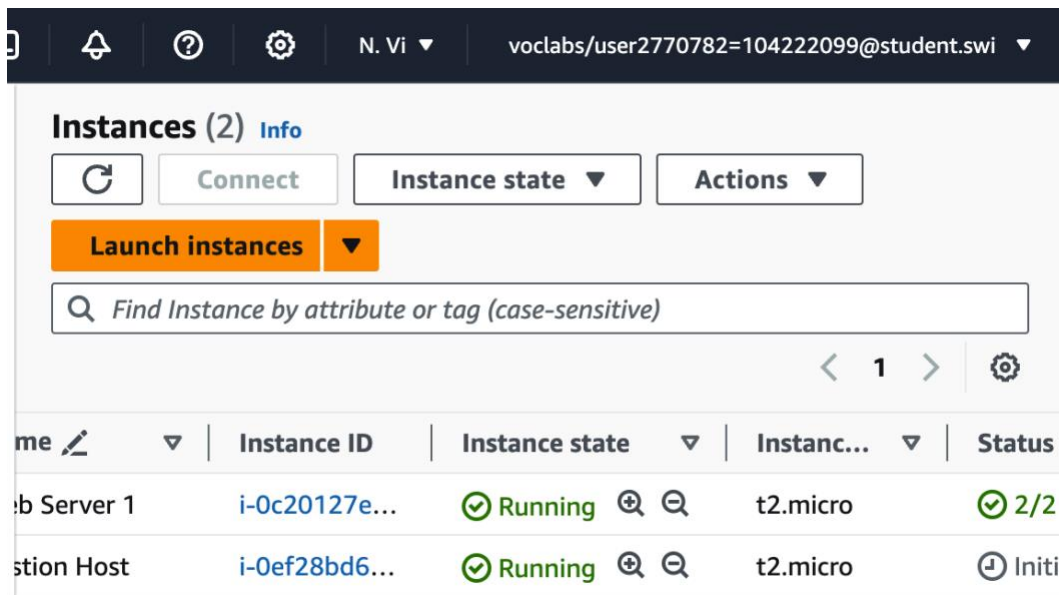
In the **AWS Management Console**, in the search box next to **Services** , search for and select **EC2**.



In the left navigation pane, choose **Instances**.

First, you will confirm that the instance is running.

Wait until the **Status Checks** for **Web Server 1** display **2/2 checks passed**.



Select **Web Server 1**.

In the **Actions** menu, choose **Image and templates > Create image**, then configure:

- **Image name:** WebServerAMI
- **Image description:** Lab AMI for Web Server

Instances (1/2) [Info](#)

[Refresh](#) [Connect](#) [Instance state ▼](#) [Actions ▲](#)

[Launch instances ▼](#)

| <input type="checkbox"/> | Name ✎ | Inst |
|-------------------------------------|------------------------|---------|
| <input checked="" type="checkbox"/> | Web Server 1 | i-0c... |
| <input type="checkbox"/> | Bastion Host | i-0e... |

Instance state menu options:

- Connect
- View details
- Manage instance state
- Instance settings ▼
- Networking ▼
- Security ▼
- Create image**

Instance details for 'Web Server 1':

- Instance type: t2.micro
- Instance ID: i-0c20127ea860c592e

Instance ID
[i-0c20127ea860c592e](#) (Web Server 1)

Image name

Maximum 127 characters. Can't be modified after creation.

Image description - optional

Maximum 255 characters

Choose **Create image**

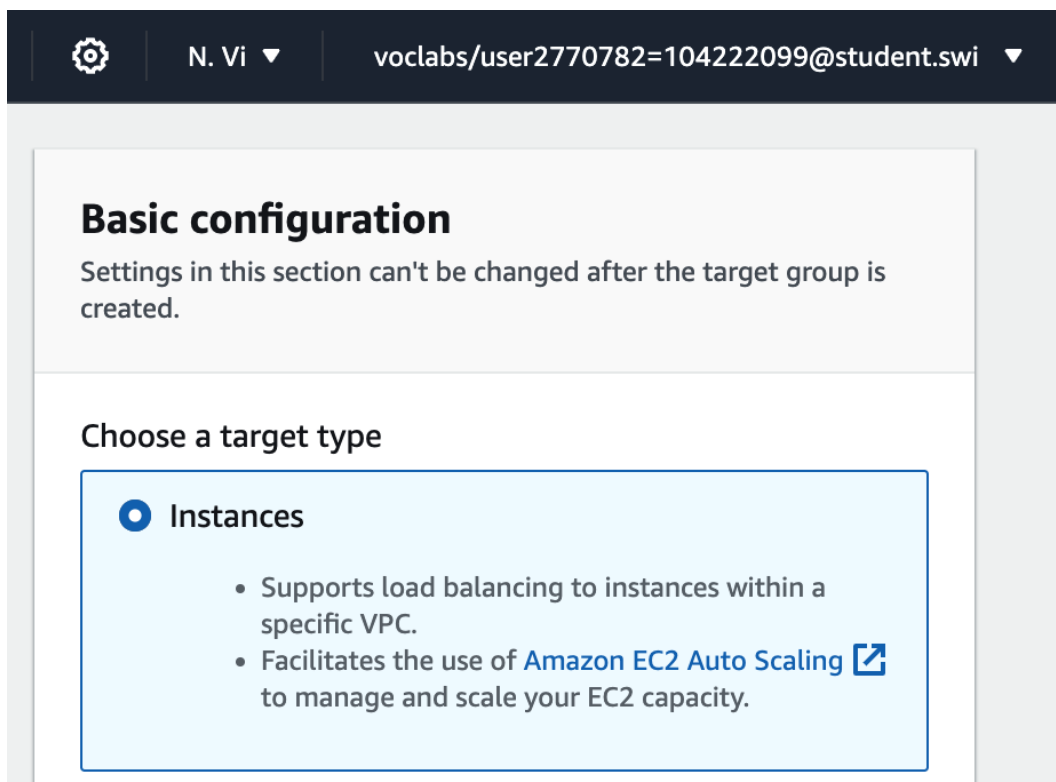
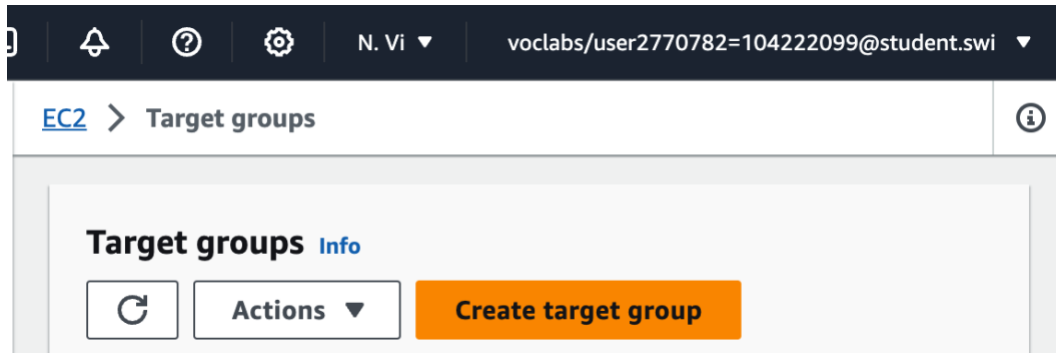
A confirmation banner displays the **AMI ID** for your new AMI.

Currently creating AMI [ami-0f8c8266d57d677c5](#) from instance [i-0c20127ea860c592e](#). Check that the AMI status is 'Available' before deleting the instance or carrying out other actions related to this AMI.

Task 2: Create a Load Balancer

In the left navigation pane, choose **Target Groups**.

- Choose **Create target group**
- Choose a target type: **Instances**
- **Target group name**, enter: LabGroup
- Select **Lab VPC** from the **VPC** drop-down menu.



?

⚙

N. Vi ▾

voclabs/user2770782=104222099@student.swi ▾

Target group name

LabGroup

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

Protocol

HTTP ▾

:

Port

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.

Lab VPC

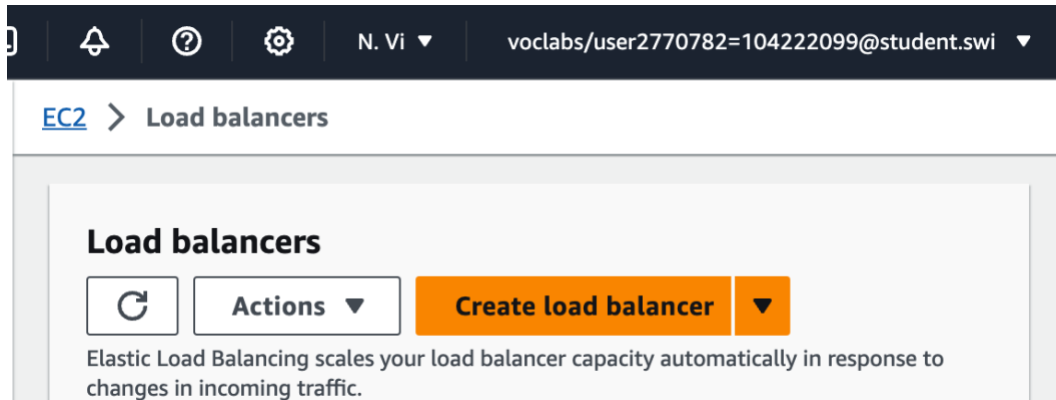
vpc-0af68087a3c60b99d

IPv4: 10.0.0.0/16

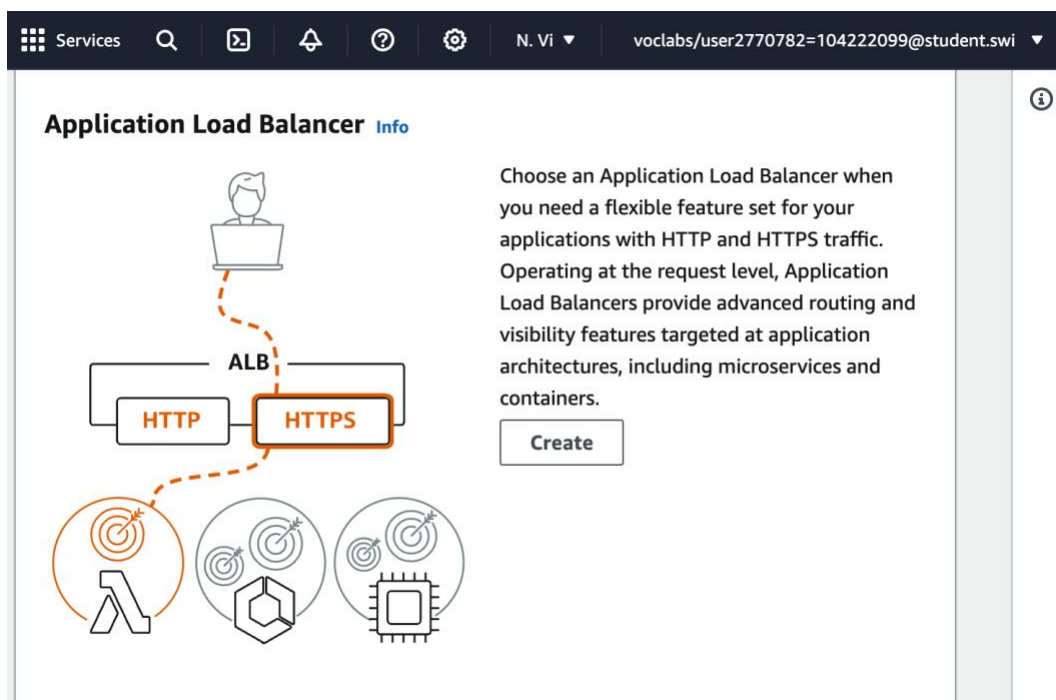
▾

Choose **Next**. The **Register targets** screen appears.
Review the settings and choose **Create target group**

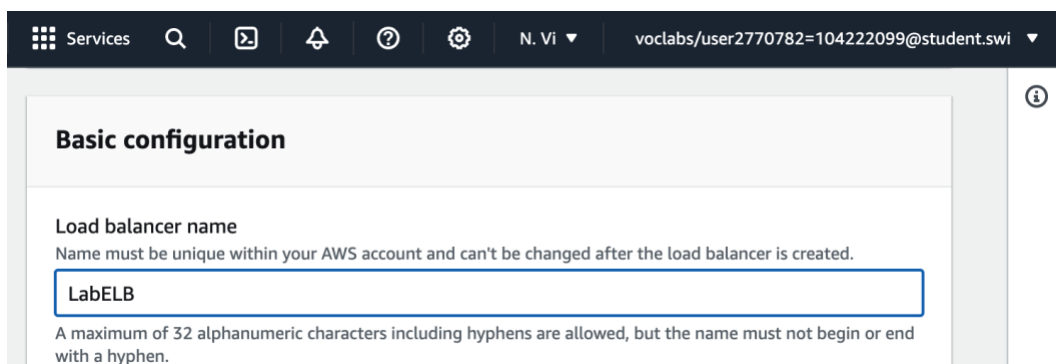
In the left navigation pane, choose **Load Balancers**.
At the top of the screen, choose **Create load balancer**.



Under **Application Load Balancer**, choose **Create**



Under **Load balancer name**, enter: LabELB



Scroll down to the **Network mapping** section, then:

- For **VPC**, choose **Lab VPC**
- Choose the **first** displayed Availability Zone, then select **Public Subnet 1** from the Subnet drop down menu that displays beneath it.
- Choose the **second** displayed Availability Zone, then select **Public Subnet 2** from the Subnet drop down menu that displays beneath it.

You should now have two subnets selected: **Public Subnet 1** and **Public Subnet 2**.

The screenshot shows the AWS Management Console interface for the 'Network mapping' section. At the top, there's a navigation bar with 'Services', a search icon, and a user profile 'N. Vi' with a dropdown arrow. The main content area has a dark header with 'VPC' and 'Info' tabs. Below this, a text block explains VPC selection. A dropdown menu shows 'Lab VPC' with ID 'vpc-0af68087a3c60b99d' and IPv4 '10.0.0.0/16'. A refresh button is below. The 'Mappings' section has an 'Info' tab and instructions. Two availability zones are listed: 'us-east-1a (use1-az6)' and 'us-east-1b (use1-az1)'. Each zone has a 'Subnet' dropdown menu. For 'us-east-1a', the selected subnet is 'subnet-0be843e8139e8716d' (Public Subnet 1). For 'us-east-1b', the selected subnet is 'subnet-0425dbc333a7d3711' (Public Subnet 2). Both sections also show 'IPv4 address' and 'Assigned by AWS' fields.

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-0af68087a3c60b99d
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-0be843e8139e8716d Public Subnet 1 ▼

IPv4 address
Assigned by AWS

☒ **us-east-1b (use1-az1)**

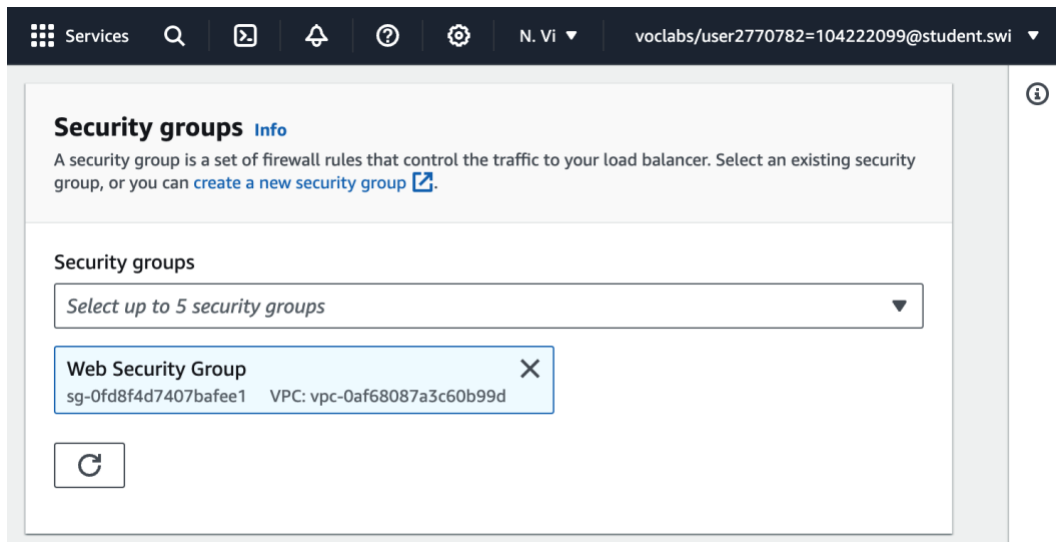
Subnet
subnet-0425dbc333a7d3711 Public Subnet 2 ▼

IPv4 address
Assigned by AWS

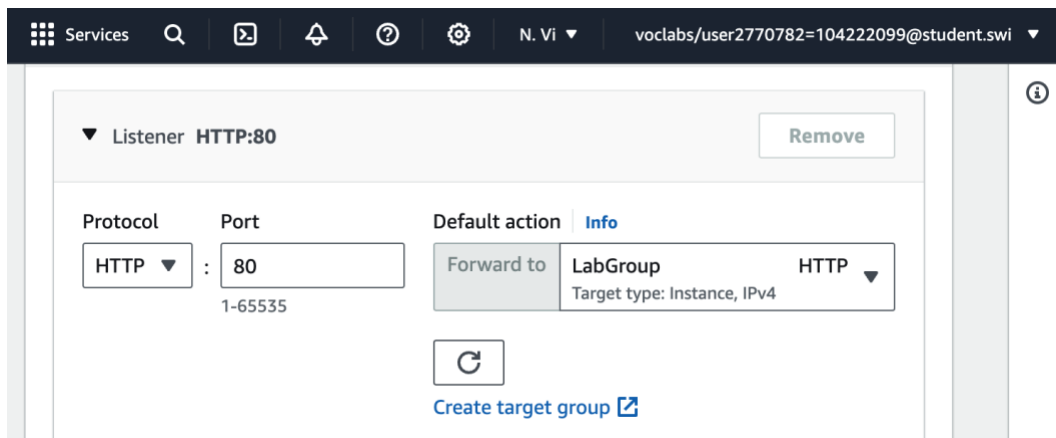
In the **Security groups** section:

- Choose the Security groups drop down menu and select **Web Security Group**
- Below the drop down menu, choose the **X** next to the default security group to remove it.

The **Web Security Group** security group should now be the only one that appears.



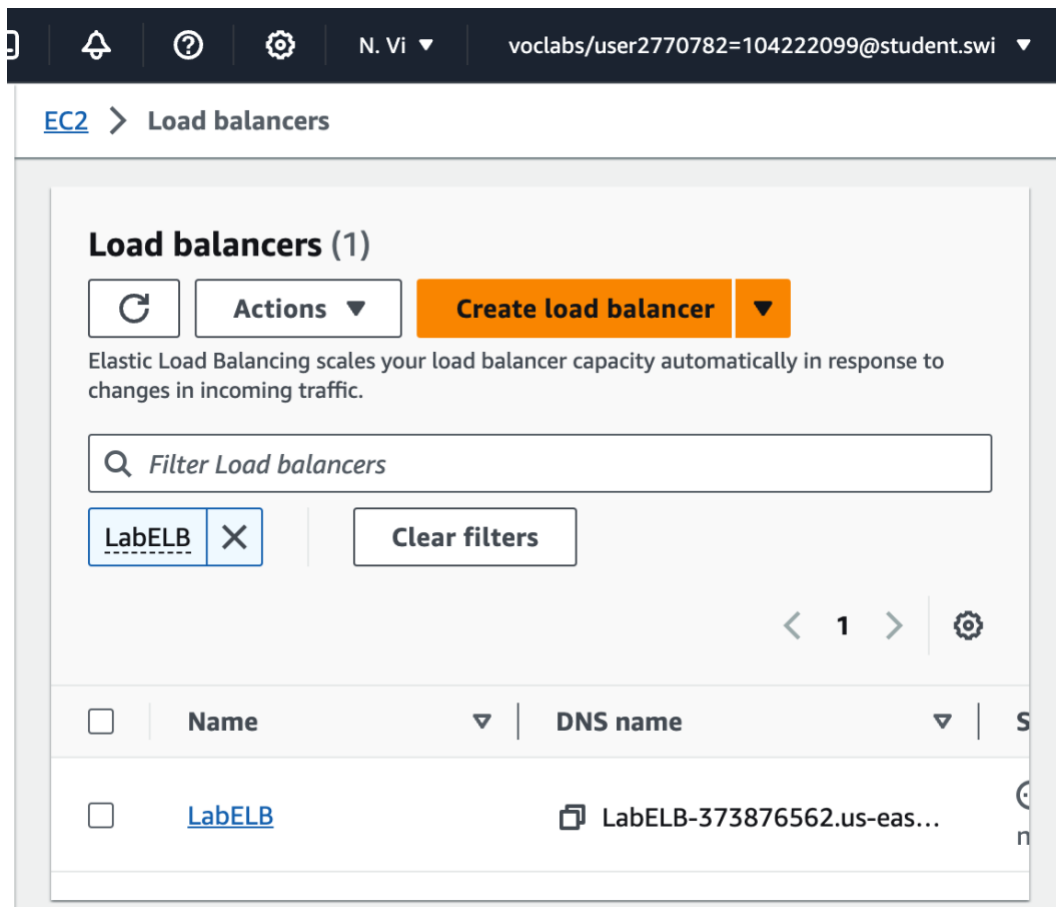
For the Listener HTTP:80 row, set the Default action to forward to **LabGroup**.



Scroll to the bottom and choose **Create load balancer**

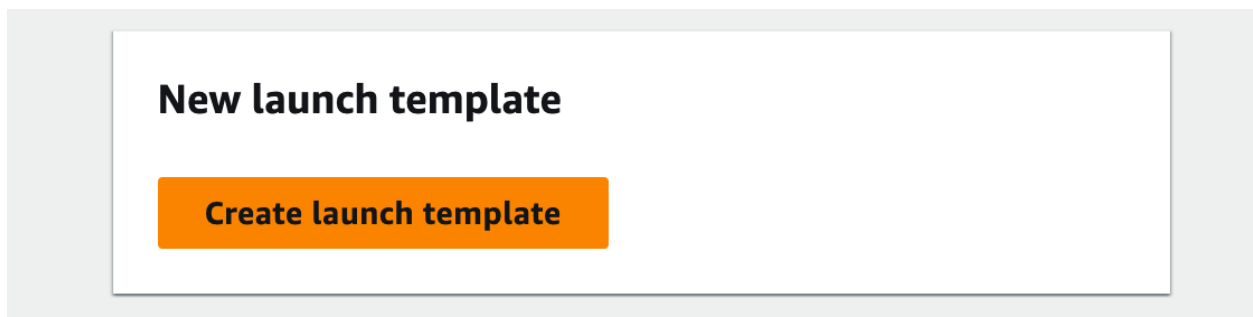
The load balancer is successfully created.

- Choose **View load balancer**



Task 3: Create a Launch Template and an Auto Scaling Group

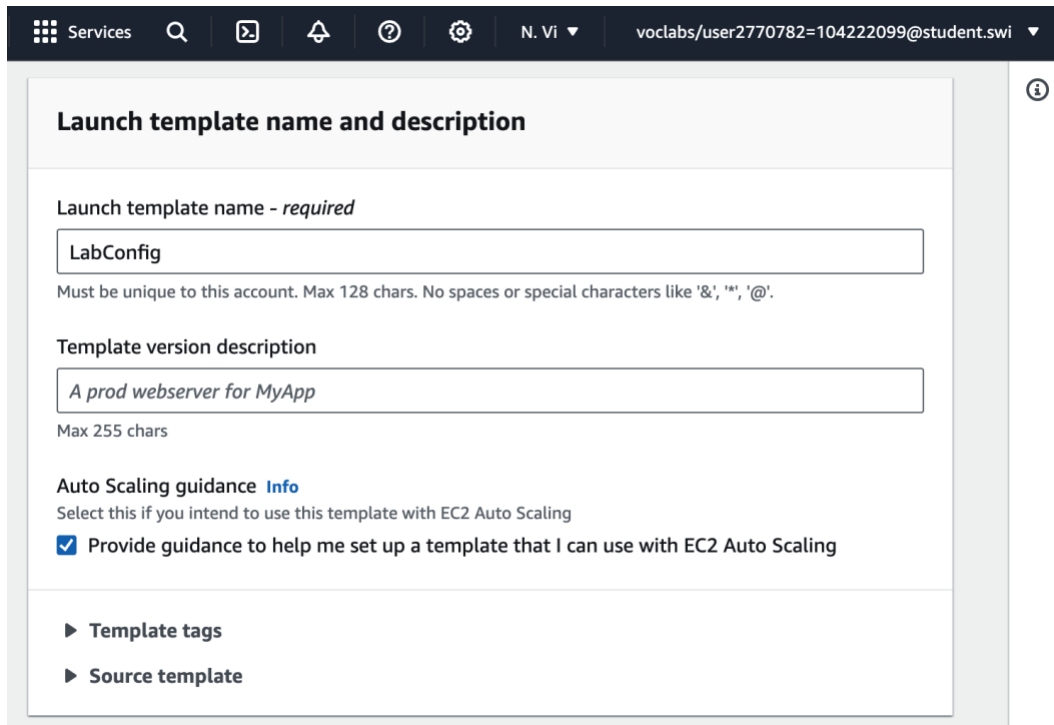
In the left navigation pane, choose **Launch Templates**.
Choose **Create launch template**



Configure the launch template settings and create it:

- **Launch template name:** LabConfig

- Under **Auto Scaling guidance**, select *Provide guidance to help me set up a template that I can use with EC2 Auto Scaling*



The screenshot shows the AWS CloudFormation console interface. At the top is a dark navigation bar with icons for Services, Search, Notifications, Help, Settings, and a user profile 'N. Vi'. The main content area is titled 'Launch template name and description'. It contains three input fields: 'Launch template name - required' with the value 'LabConfig', 'Template version description' with the value 'A prod webserver for MyApp', and 'Auto Scaling guidance' with a checked checkbox for 'Provide guidance to help me set up a template that I can use with EC2 Auto Scaling'. Below these fields are expandable sections for 'Template tags' and 'Source template'. A right-hand sidebar with an information icon is partially visible.

Launch template name and description

Launch template name - *required*

LabConfig

Must be unique to this account. Max 128 chars. No spaces or special characters like '&', '*', '@'.

Template version description

A prod webserver for MyApp

Max 255 chars

Auto Scaling guidance [Info](#)

Select this if you intend to use this template with EC2 Auto Scaling

☒ Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

► Template tags

► Source template

- In the Application and OS Images (Amazon Machine Image) area, choose *My AMIs*.
- **Amazon Machine Image (AMI)**: choose *Web Server AMI*

Services

N. Vi
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▼ **Application and OS Images (Amazon Machine Image) - required** [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

My AMIs

Quick Start

☒ Owned by me

☐ Shared with me

[Browse more AMIs](#)

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

WebServerAMI
ami-0f8c8266d57d677c5
2023-10-22T00:29:48.000Z
boot mode: uefi-preferred

Virtualization: hvm
ENA enabled: true
Root device type: ebs

Description
Lab AMI for Web Server

| Architecture | AMI ID |
|--------------|-----------------------|
| x86_64 | ami-0f8c8266d57d677c5 |

- **Instance type:** choose *t2.micro*
- **Key pair name:** choose *vockey*

Services

Q

N. Vi

voclabs/user2770782=104222099@student.swi

▼ Instance type Info

Advanced

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

vockey

▼

[Create new key pair](#)

- **Firewall (security groups):** choose *Select existing security group*
- **Security groups:** choose *Web Security Group*

Services
N. Vi
voclabs/user2770782=104222099@student.swi

▼
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

Web Security Group sg-0fd8f4d7407bafef1
VPC: vpc-0af68087a3c60b99d

Compare security group rules

▶ Advanced network configuration

- Scroll down to the **Advanced details** area and expand it.
- Scroll down to the **Detailed CloudWatch monitoring** setting. Select *Enable*

Services
N. Vi
voclabs/user2770782=104222099@student.swi

Detailed CloudWatch monitoring
Info

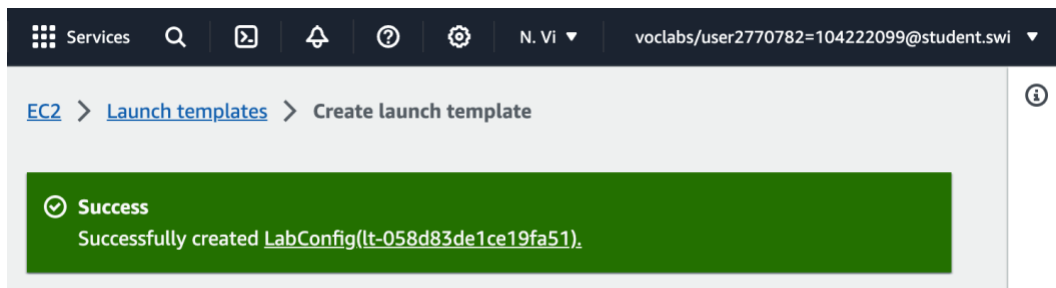
Enable

Additional charges apply

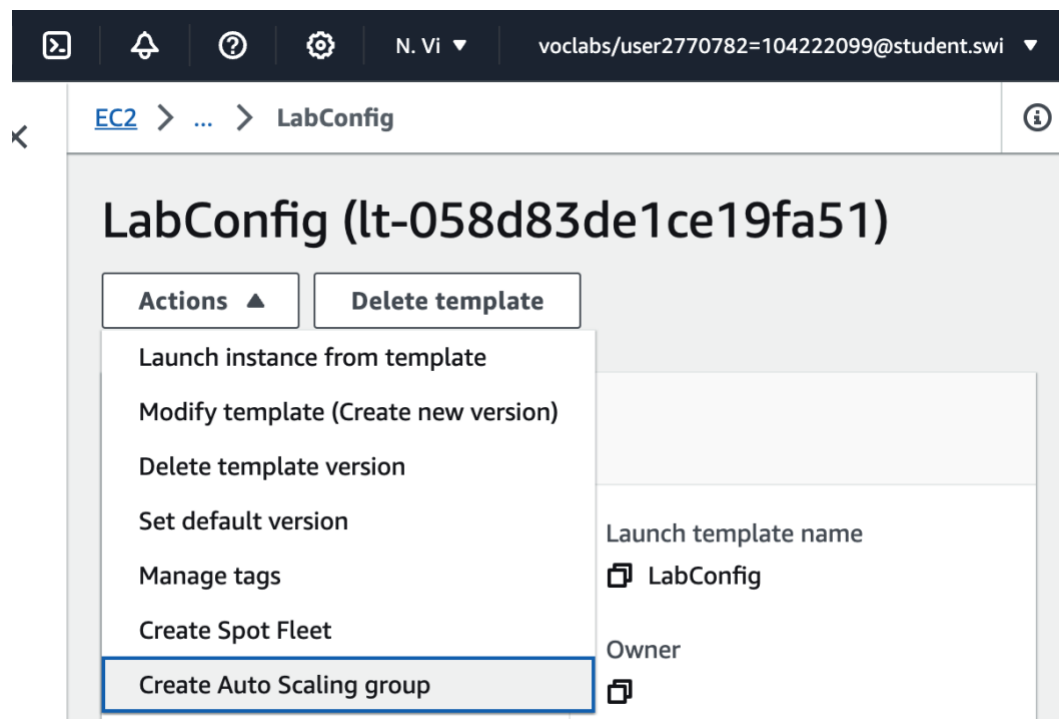
Choose **Create launch template**

Cancel
Create launch template

In the Success dialog, choose the **LabConfig** launch template.



From the **Actions** menu, choose *Create Auto Scaling group*



Configure the details in Step 1 (Choose launch template or configuration):

- **Auto Scaling group name:** Lab Auto Scaling Group
- **Launch template:** confirm that the *LabConfig* template you just created is selected.
- Choose **Next**

Services

N. Vi

voclabs/user2770782=104222099@student.swi

Name

Auto Scaling group name

Enter a name to identify the group.

Lab Auto Scaling

Must be unique to this account in the current Region and no more than 255 characters.

Launch template

Info

Switch to launch configuration

Launch template

Choose a launch template that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

LabConfig

Create a launch template

Version

Default (1)

Create a launch template version

Configure the details in Step 2 (Choose instance launch options):

- **VPC:** choose *Lab VPC*
- **Availability Zones and subnets:** Choose *Private Subnet 1* and then choose *Private Subnet 2*.
- Choose **Next**

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-0af68087a3c60b99d (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-1b | subnet-
0ca0d699eea29a96f (Private Subnet 2)
10.0.3.0/24

✕

[Create a subnet](#)

Cancel

Skip to review

Previous

Next

Configure the details in Step 3 (Configure advanced options):

- Choose **Attach to an existing load balancer**
 - **Existing load balancer target groups:** select *LabGroup*.
- In the **Additional settings** pane:
 - Select **Enable group metrics collection within CloudWatch**
- Choose **Next**

Services

N. Vi

voclabs/user2770782=104222099@student.swi

Load balancing

Info

Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define.

☐ No load balancer
Traffic to your Auto Scaling group will not be fronted by a load balancer.

☒ Attach to an existing load balancer
Choose from your existing load balancers.

☐ Attach to a new load balancer
Quickly create a basic load balancer to attach to your Auto Scaling group.

Attach to an existing load balancer

Select the load balancers that you want to attach to your Auto Scaling group.

☒ Choose from your load balancer target groups
This option allows you to attach Application, Network, or Gateway Load Balancers.

☐ Choose from Classic Load Balancers

Existing 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

LabGroup | HTTP
Application Load Balancer: LabELB

Additional settings

Monitoring

Info

☒ Enable group metrics collection within CloudWatch

Default instance warmup

Info

The amount of time that CloudWatch metrics for new instances do not contribute to the group's aggregated instance metrics, as their usage data is not reliable yet.

☐ Enable default instance warmup

Cancel

Skip to review

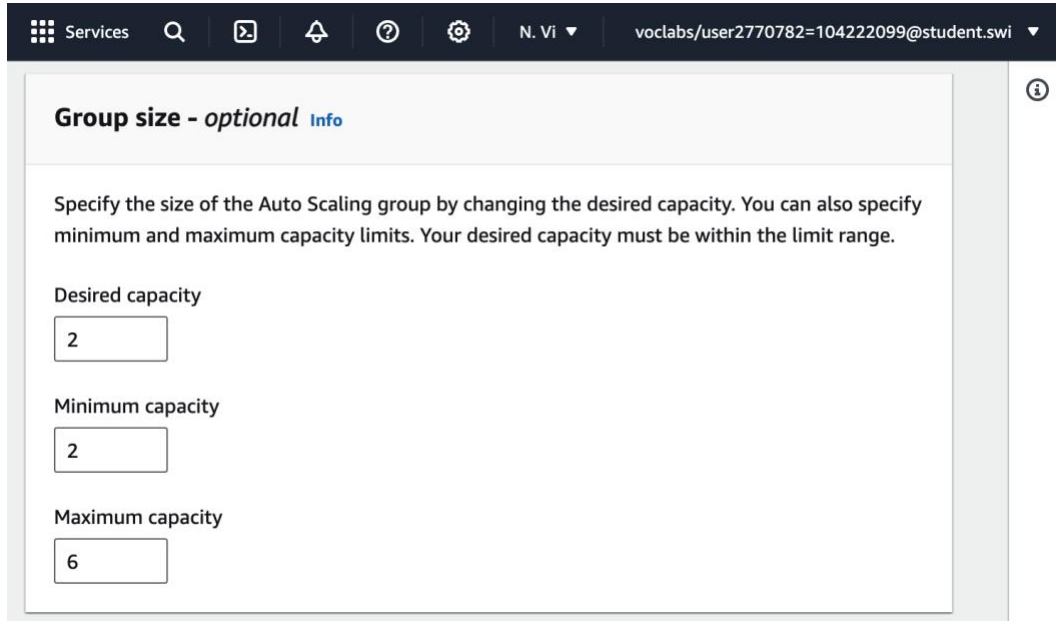
Previous

Next

Configure the details in Step 4 (Configure group size and scaling policies - optional):

- Under **Group size**, configure:

- **Desired capacity:** 2
- **Minimum capacity:** 2
- **Maximum capacity:** 6



The screenshot shows the AWS IAM console interface. At the top is a dark navigation bar with the 'Services' menu, search, and navigation icons. The user's name 'N. Vi' and email 'voclabs/user2770782=104222099@student.swi' are displayed on the right. The main content area is titled 'Group size - optional' with an 'Info' link. Below the title, a paragraph explains that the size of the Auto Scaling group is determined by the desired capacity, which must be within the specified minimum and maximum capacity limits. Three input fields are provided: 'Desired capacity' with the value '2', 'Minimum capacity' with the value '2', and 'Maximum capacity' with the value '6'.

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

Minimum capacity

Maximum capacity

- Under **Scaling policies**, choose *Target tracking scaling policy* and configure:
 - **Scaling policy name:** LabScalingPolicy
 - **Metric type:** *Average CPU Utilization*
 - **Target value:** 60

Services

N. Vi

voclabs/user2770782=104222099@student.swi

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

LabScalingPolicy

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

60

Instance warmup [Info](#)

300

 seconds

☐ Disable scale in to create only a scale-out policy

Configure the details in Step 5 (Add notifications - optional):

Services

N. Vi

voclabs/user2770782=104222099@student.swi

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 5 of 7

Add notifications - optional [Info](#)

Send notifications to SNS topics whenever Amazon EC2 Auto Scaling launches or terminates the EC2 instances in your Auto Scaling group.

Add notification

Cancel

Skip to review

Previous

Next

Configure the details in Step 6 (Add tags - optional):

Tags applied to the Auto Scaling group will be automatically propagated to the instances that are launched.

- Choose **Add tag** and Configure the following:
 - **Key:** Name
 - **Value:** Lab Instance
- Choose **Next**

Tags (1)

| Key | Value - optional |
|------|------------------|
| Name | Lab Instance |

Tag new instances ☒

[Remove](#)

[Add tag](#)

49 remaining

[Cancel](#) [Previous](#) [Next](#)

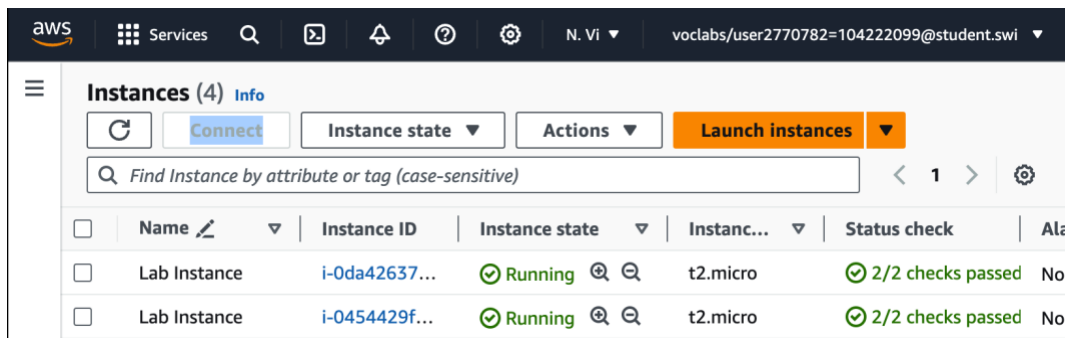
Configure the details in Step 6 (Review):

- Review the details of your Auto Scaling group
- Choose **Create Auto Scaling group**

Task 4: Verify that Load Balancing is Working

In the left navigation pane, choose **Instances**.

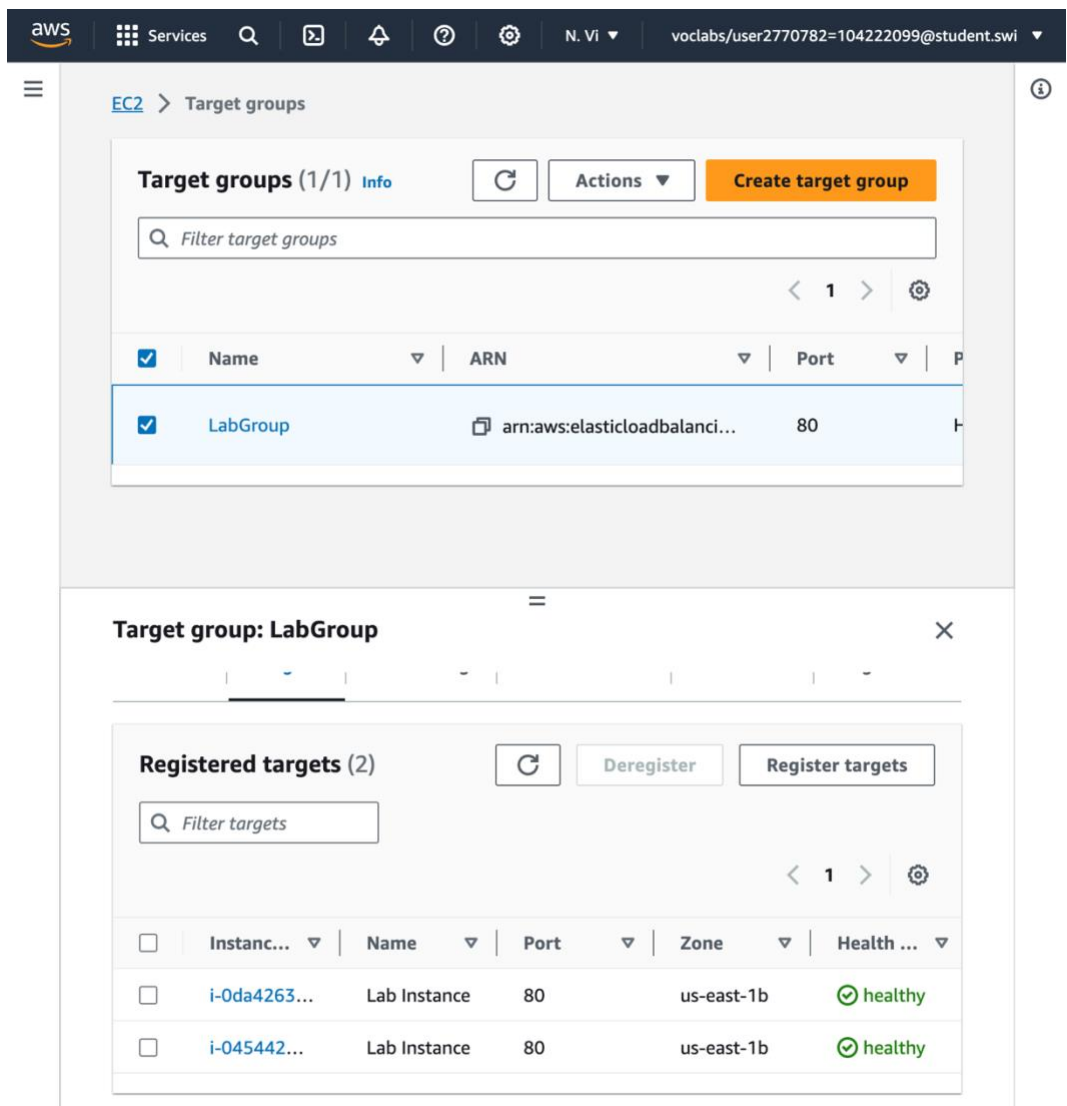
You should see two new instances named **Lab Instance**. These were launched by Auto Scaling.



In the left navigation pane, choose **Target Groups**.

Select *LabGroup*

Choose the **Targets** tab.



In the left navigation pane, choose **Load Balancers**.

Select the *LabELB* load balancer.

In the Details pane, copy the **DNS name** of the load balancer, making sure to omit "(A Record)".

The screenshot shows the AWS Management Console interface. At the top, the navigation bar includes the AWS logo, 'Services', a search icon, and a user profile 'N. Vi' with the email 'voclabs/user2770782=104222099@student.swi'. The main content area is titled 'EC2 > Load balancers'. It features a 'Load balancers (1/1)' section with a refresh button, an 'Actions' dropdown, and a 'Create load balancer' button. Below this is a search bar 'Filter Load balancers' and a table of load balancers. The table has columns for 'Name', 'DNS name', 'State', and 'VPC ID'. One load balancer, 'LabELB', is listed with a status of 'Active' and a VPC ID of 'vpc-0af68c...'. Below the table, the 'Load balancer: LabELB' details pane is open. It shows two subnets: 'subnet-0be843e8139e8716' (us-east-1a, use1-az6) and 'subnet-0425dbc333a7d371' (us-east-1b, use1-az1). At the bottom, it displays the 'Load balancer ARN' as 'arn:aws:elasticloadbalancing:us-east-1:488479474556:loadbalancer/app/LabELB/9a5744a8b1e0d39b' and the 'DNS name' as 'LabELB-373876562.us-east-1.elb.amazonaws.com (A Record)'.

| Name | DNS name | State | VPC ID |
|--------|--|--------|---------------|
| LabELB | LabELB-373876562.us-east-1.elb.amazonaws.com | Active | vpc-0af68c... |

Load balancer: LabELB

subnets:

- subnet-0be843e8139e8716 us-east-1a (use1-az6)
- subnet-0425dbc333a7d371 us-east-1b (use1-az1)

Load balancer ARN: arn:aws:elasticloadbalancing:us-east-1:488479474556:loadbalancer/app/LabELB/9a5744a8b1e0d39b

DNS name: LabELB-373876562.us-east-1.elb.amazonaws.com (A Record)

Open a new web browser tab, paste the DNS Name you just copied, and press Enter.

labelb-373876562.us-east-1.elb.amazonaws.com

aws Load Test RDS

| Meta-Data | Value |
|-------------------|---------------------|
| InstanceId | i-0454429f058557e4e |
| Availability Zone | us-east-1b |

Current CPU Load: 4%

Task 5: Test Auto Scaling

In the search box next to **Services**, search for and select **CloudWatch**.

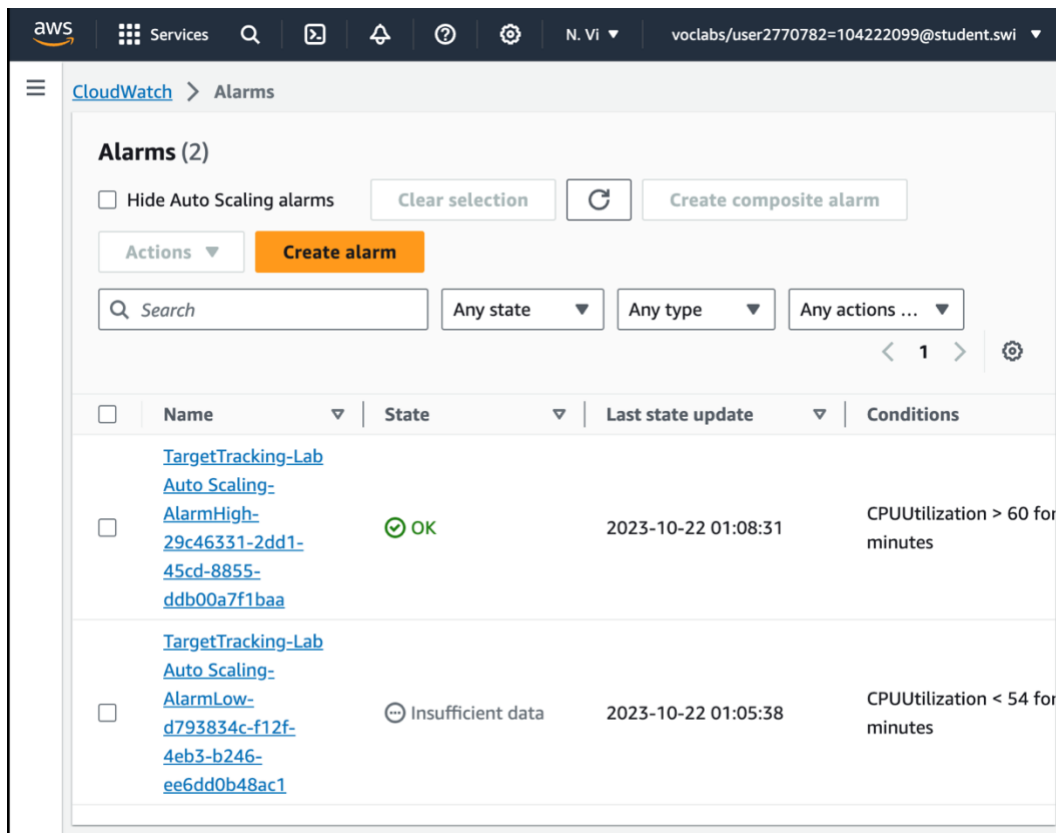
aws Services 🔍 📄 🔔 ⓘ ⚙️ N. Vi ▼ voclabs/user2770782=104222099@student.swi ▼

CloudWatch ✕ Cancel

Services (3) Features (15) Resources **New** Blogs (547) Documentation (11,677) Knowledge Articles

▶ CloudWatch ☆
Monitor Resources and Applications

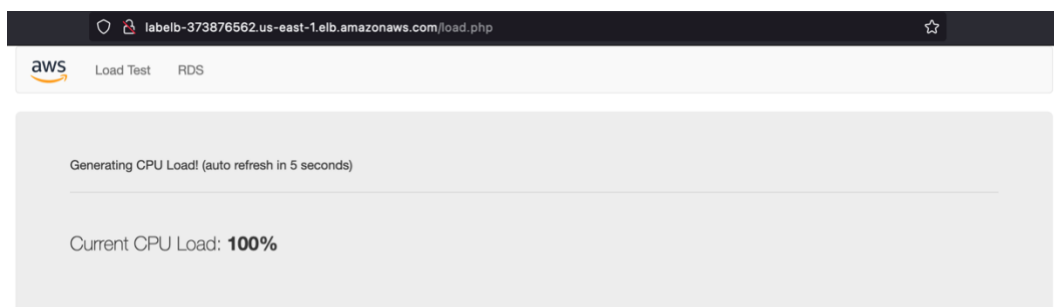
In the left navigation pane, choose **All alarms**.



The screenshot shows the AWS CloudWatch Alarms console. At the top, there's a header with the AWS logo, 'Services', a search bar, and navigation icons. Below the header, the breadcrumb 'CloudWatch > Alarms' is visible. The main section is titled 'Alarms (2)'. It includes a checkbox for 'Hide Auto Scaling alarms', a 'Clear selection' button, a refresh icon, and a 'Create composite alarm' button. There's also an 'Actions' dropdown and a prominent orange 'Create alarm' button. Below these are filters: a search bar, 'Any state', 'Any type', and 'Any actions ...'. A pagination bar shows '< 1 >' and a settings gear. The alarm list table has columns: Name, State, Last state update, and Conditions. It contains two entries:

| Name | State | Last state update | Conditions |
|---|-------------------|---------------------|---------------------------------|
| TargetTracking-Lab Auto Scaling- AlarmHigh- 29c46331-2dd1- 45cd-8855- ddb00a7f1baa | OK | 2023-10-22 01:08:31 | CPUUtilization > 60 for minutes |
| TargetTracking-Lab Auto Scaling- AlarmLow- d793834c-f12f- 4eb3-b246- ee6dd0b48ac1 | Insufficient data | 2023-10-22 01:05:38 | CPUUtilization < 54 for minutes |

Choose the **OK** alarm, which has *AlarmHigh* in its name.
 Return to the browser tab with the web application.
 Choose **Load Test** beside the AWS logo.



The screenshot shows the AWS Load Test console. The top bar includes the AWS logo, 'Load Test', and 'RDS'. The main content area has a header 'Generating CPU Load! (auto refresh in 5 seconds)' and a progress bar. Below the progress bar, it displays 'Current CPU Load: 100%'.

Return to browser tab with the **CloudWatch** console.
 Wait until the **AlarmHigh** alarm enters the *In alarm* state.

aws Services 🔍 📄 🔔 ⓘ ⚙️ N. Vi ▼ voclabs/user2770782=104222099@student.swi ▼

CloudWatch > Alarms

Alarms (2)

☐ Hide Auto Scaling alarms Clear selection ↻ Create composite alarm

Actions ▼ Create alarm

Any state ▼ Any type ▼ Any actions ... ▼

< 1 > ⚙️

| <input type="checkbox"/> | Name ▼ | State ▼ | Last state update ▼ | Conditions |
|--------------------------|--|-------------|---------------------|---------------------------------|
| <input type="checkbox"/> | TargetTracking-Lab Auto Scaling-AlarmLow-a22ef3ce-c19b-417a-815c-e6a649b519be | ✔️ OK | 2023-10-22 01:25:28 | CPUUtilization < 45 for minutes |
| <input type="checkbox"/> | TargetTracking-Lab Auto Scaling-AlarmHigh-29c46331-2dd1-45cd-8855-ddb00a7f1baa | ⚠️ In alarm | 2023-10-22 01:24:31 | CPUUtilization > 60 for minutes |

In the search box next to **Services** , search for and select **EC2**.
In the left navigation pane, choose **Instances**.

aws Services 🔍 📄 🔔 ⓘ ⚙️ N. Vi ▼ voclabs/user2770782=104222099@student.swi ▼

Instances (6) Info

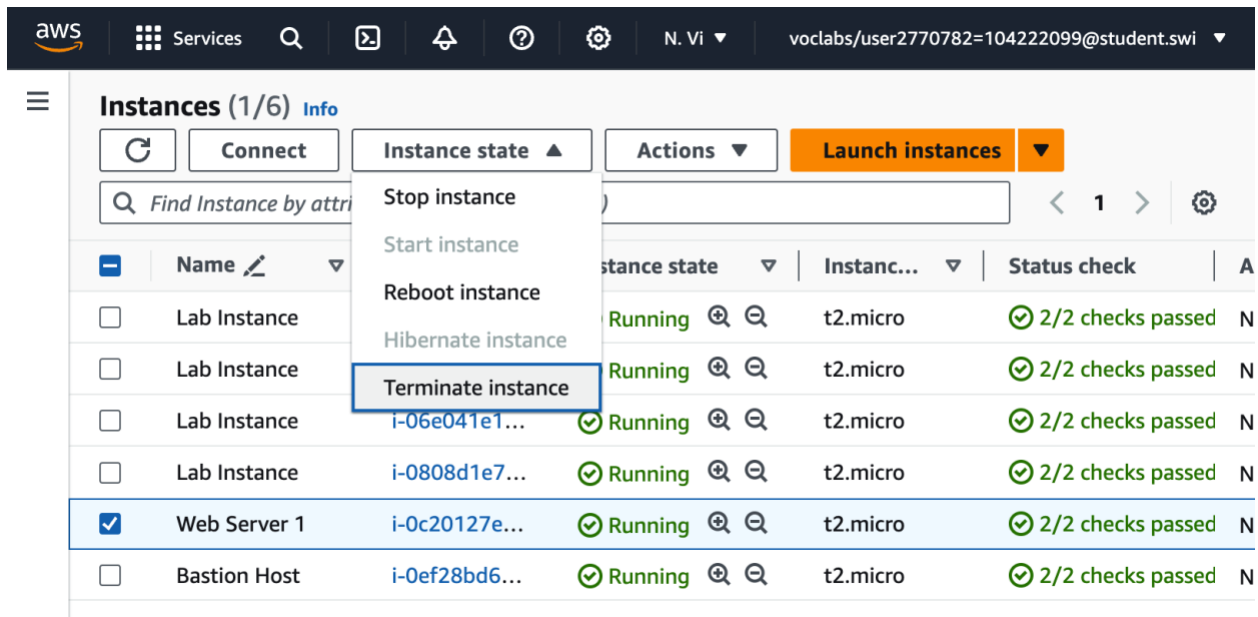
↻ Connect Instance state ▼ Actions ▼ Launch instances ▼

< 1 > ⚙️

| <input type="checkbox"/> | Name ✎ ▼ | Instance ID | Instance state ▼ | Instanc... ▼ | Status check | A |
|--------------------------|--------------|---------------|------------------|--------------|----------------------|---|
| <input type="checkbox"/> | Lab Instance | i-0da42637... | ✔️ Running 🔍 🔍 | t2.micro | ✔️ 2/2 checks passed | N |
| <input type="checkbox"/> | Lab Instance | i-0454429f... | ✔️ Running 🔍 🔍 | t2.micro | ✔️ 2/2 checks passed | N |
| <input type="checkbox"/> | Lab Instance | i-06e041e1... | ✔️ Running 🔍 🔍 | t2.micro | ✔️ 2/2 checks passed | N |
| <input type="checkbox"/> | Lab Instance | i-0808d1e7... | ✔️ Running 🔍 🔍 | t2.micro | ✔️ 2/2 checks passed | N |
| <input type="checkbox"/> | Web Server 1 | i-0c20127e... | ✔️ Running 🔍 🔍 | t2.micro | ✔️ 2/2 checks passed | N |
| <input type="checkbox"/> | Bastion Host | i-0ef28bd6... | ✔️ Running 🔍 🔍 | t2.micro | ✔️ 2/2 checks passed | N |

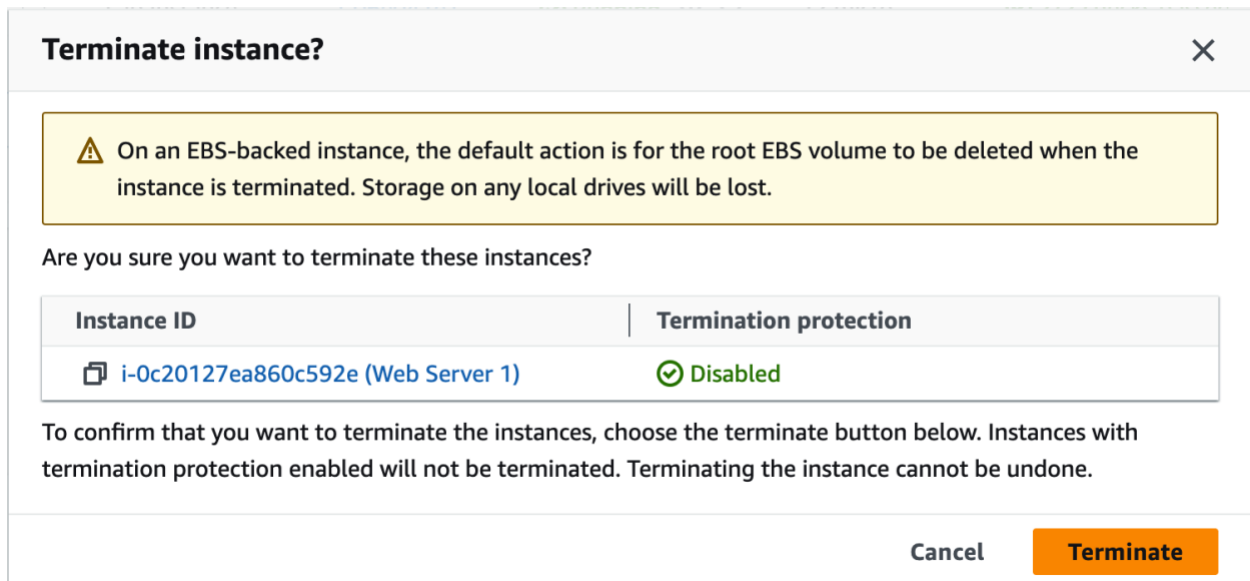
Task 6: Terminate Web Server 1

Select **Web Server 1** (and ensure it is the only instance selected).
In the **Instance state** menu, choose **Instance State > Terminate Instance**.
Choose **Terminate**



The screenshot shows the AWS Management Console interface for the 'Instances' page. The 'Instance state' dropdown menu is open, showing options: Stop instance, Start instance, Reboot instance, Hibernate instance, and Terminate instance (highlighted). The table below lists instances, with 'Web Server 1' (i-0c20127e...) selected.

| Name | Instance ID | Instance state | Instance type | Status check | Actions |
|--------------|---------------|----------------|---------------|-------------------|---------|
| Lab Instance | i-06e041e1... | Running | t2.micro | 2/2 checks passed | |
| Lab Instance | i-0808d1e7... | Running | t2.micro | 2/2 checks passed | |
| Lab Instance | i-0c20127e... | Running | t2.micro | 2/2 checks passed | |
| Lab Instance | i-0808d1e7... | Running | t2.micro | 2/2 checks passed | |
| Web Server 1 | i-0c20127e... | Running | t2.micro | 2/2 checks passed | |
| Bastion Host | i-0ef28bd6... | Running | t2.micro | 2/2 checks passed | |



The screenshot shows the 'Terminate instance?' dialog box. It contains a warning about EBS-backed instances and a table with the instance ID 'i-0c20127ea860c592e (Web Server 1)' and 'Termination protection' status 'Disabled'. The 'Terminate' button is highlighted.

Terminate instance?

⚠ On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.

Are you sure you want to terminate these instances?

| Instance ID | Termination protection |
|------------------------------------|------------------------|
| i-0c20127ea860c592e (Web Server 1) | Disabled |

To confirm that you want to terminate the instances, choose the terminate button below. Instances with termination protection enabled will not be terminated. Terminating the instance cannot be undone.

Cancel Terminate

END LAB.