Assignment 3:

Provision VPC in us-east-1 region with 2 public and private subnets on two availability zones. Deploy Dynamic website presentation layer on ec2 instance on one of the public subnet. Spin up RDS (Managed Database) on private subnet and connect web layer to database layer using connection string. Finally deploy dynamic website.

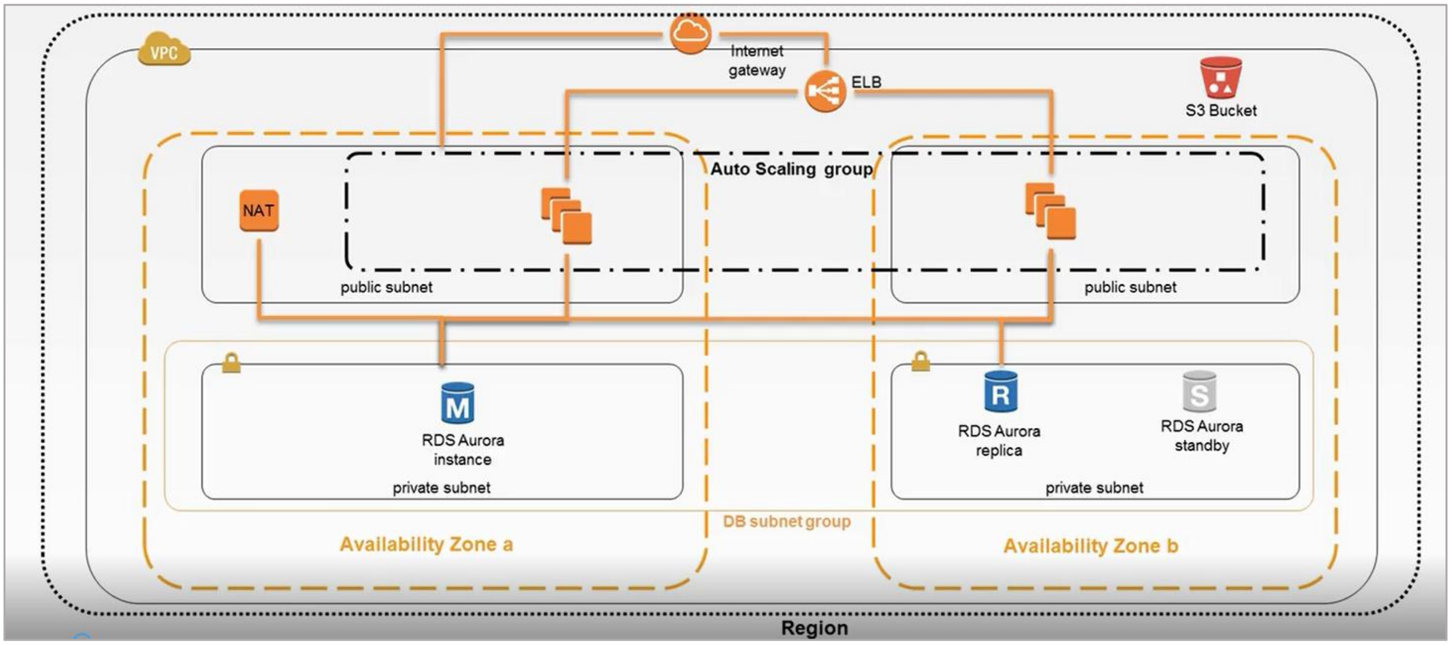
Below is the summary of all steps for this assignment.

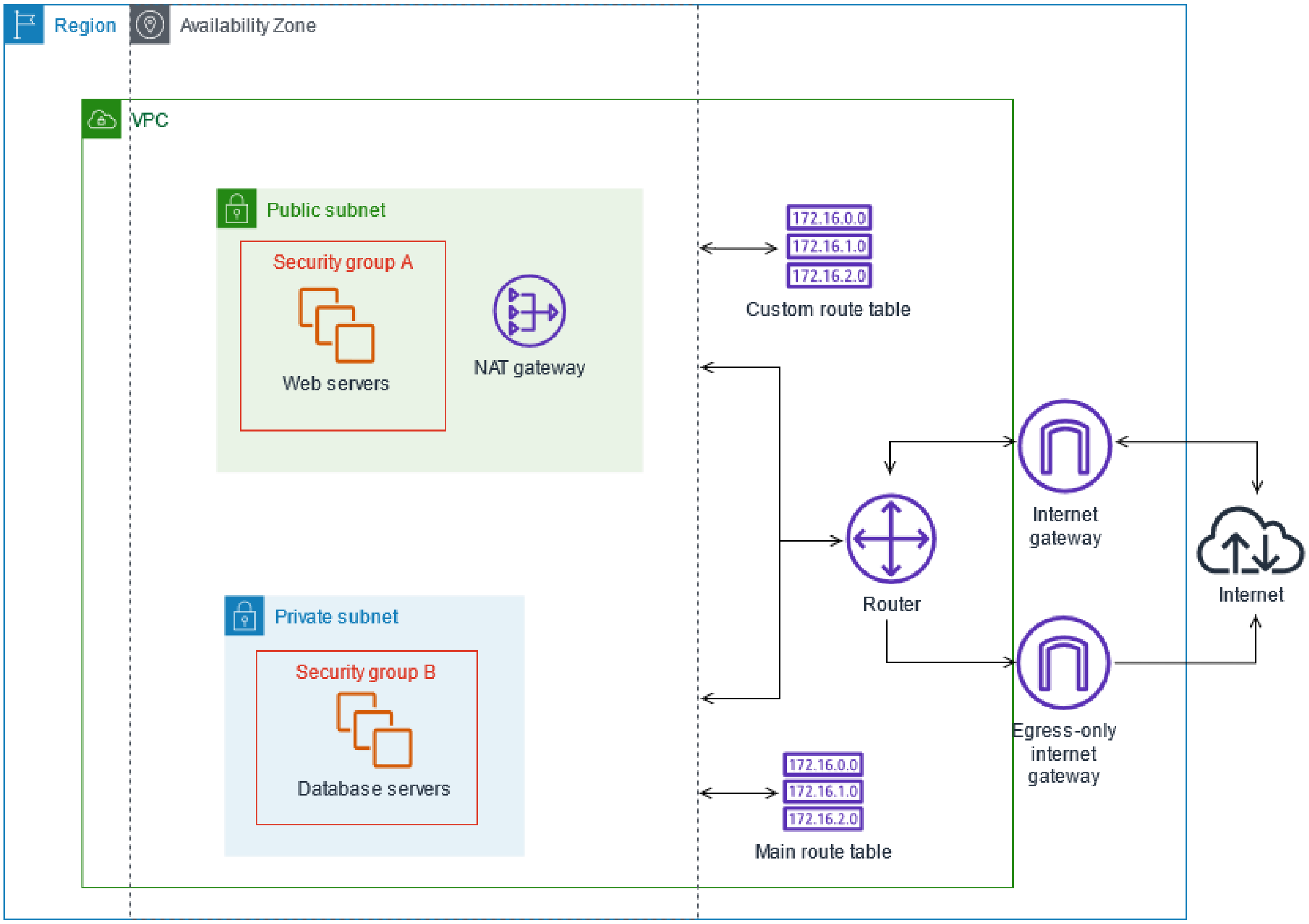
1. Create EC2 with all the required software to be installed. Check if the webserver is working with web page access.
2. Create new AMI with this instance.
3. Create VPC
    a. With Public subnet - web server associated with this → website is deployed here
    b. With Private subnet – Database server associated with this → DB server running
    c. Default route table
4. Create target group - To route traffic to the targets in a target group, specify the target group in an action when you create a listener
5. Create load balancer – public zone
6. Create a launch configuration and Auto scaling
    a. Create an Auto Scaling group using a launch configuration
    b. <u>Note</u> : Enable cloud watch, monitor health check

Once we finish all the above steps, we can access the website to see the load balance is working or not.

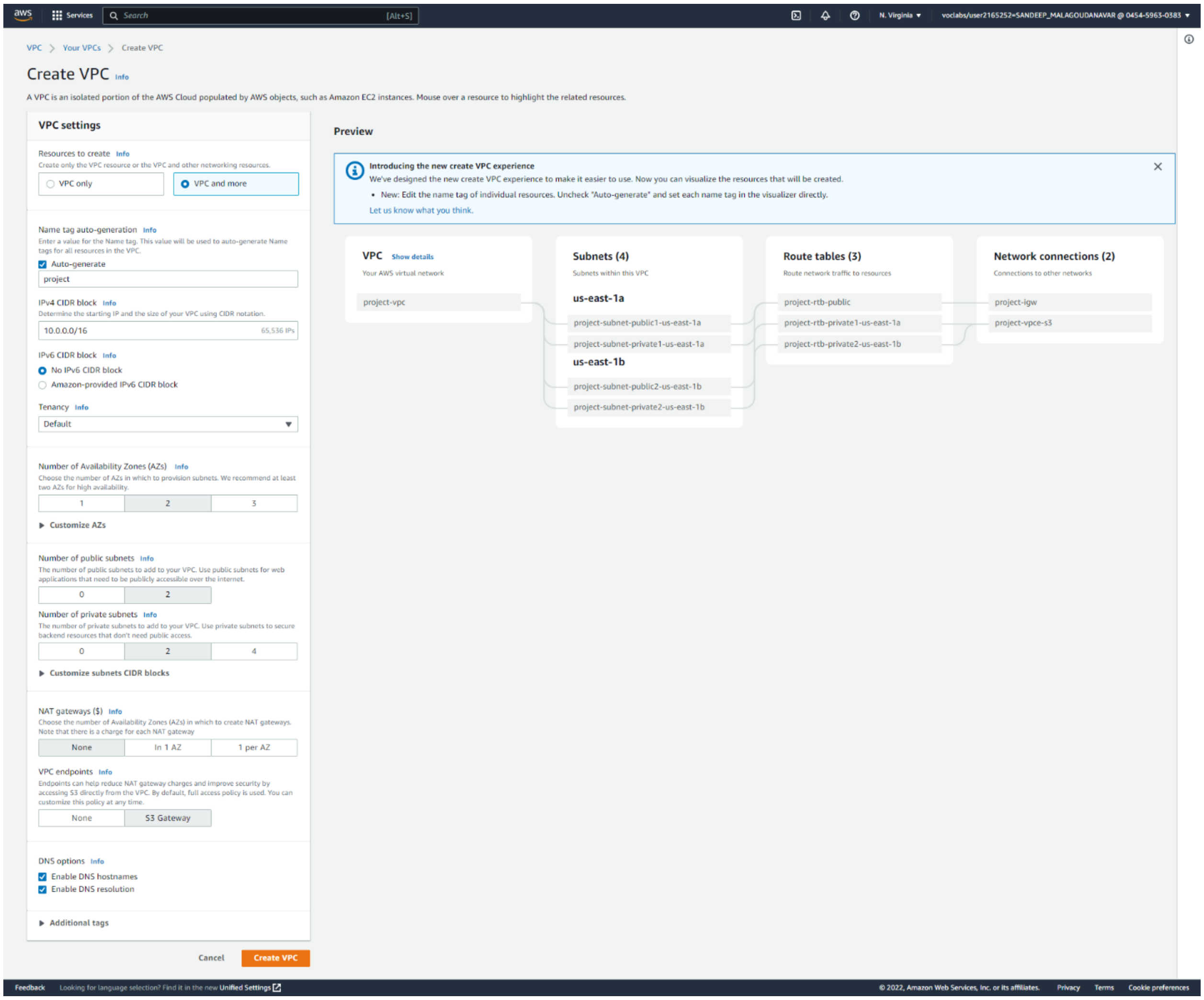
Also we can stop instance to see the request is going to available to webserver.

Below is the example image for the VPC with private and public subnet.




Region
Availability Zone
VPC
Public subnet
Security group A
Web servers
NAT gateway
Private subnet
Security group B
Database servers
172.16.0.0
172.16.1.0
172.16.2.0
Custom route table
172.16.0.0
172.16.1.0
172.16.2.0
Main route table
Router
Internet gateway
Egress-only internet gateway
Internet

1. Create VPC


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user2165252=SANDEEP_MALAGOUDANAVAR @ 0454-5963-0383
VPC > Your VPCs > Create VPC
Info
Cancel
Create VPC
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

Create VPC

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances. Mouse over a resource to highlight the related resources.

VPC settings

Resources to create
Create only the VPC resource or the VPC and other networking resources.
○ VPC only ● VPC and more

Name tag auto-generation
Enter a value for the Name tag. This value will be used to auto-generate Name tags for all resources in the VPC.
☑ Auto-generate
project

IPv4 CIDR block
Determine the starting IP and the size of your VPC using CIDR notation.
10.0.0.0/16 65,536 IPs

IPv6 CIDR block
● No IPv6 CIDR block
○ Amazon-provided IPv6 CIDR block

Tenancy
Default

Number of Availability Zones (AZs)
Choose the number of AZs in which to provision subnets. We recommend at least two AZs for high availability.
1 | [✓ 2] | 3

▶ Customize AZs

Number of public subnets
The number of public subnets to add to your VPC. Use public subnets for web applications that need to be publicly accessible over the internet.
0 | [✓ 2]

Number of private subnets
The number of private subnets to add to your VPC. Use private subnets to secure backend resources that don't need public access.
0 | [✓ 2] | 4

▶ Customize subnets CIDR blocks

NAT gateways ($)
Choose the number of Availability Zones (AZs) in which to create NAT gateways. Note that there is a charge for each NAT gateway
[✓ None] | In 1 AZ | 1 per AZ

VPC endpoints
Endpoints can help reduce NAT gateway charges and improve security by accessing S3 directly from the VPC. By default, full access policy is used. You can customize this policy at any time.
None | [✓ S3 Gateway]

DNS options
☑ Enable DNS hostnames
☑ Enable DNS resolution

▶ Additional tags

Preview

Introducing the new create VPC experience
We've designed the new create VPC experience to make it easier to use. Now you can visualize the resources that will be created.
- New: Edit the name tag of individual resources. Uncheck "Auto-generate" and set each name tag in the visualizer directly.

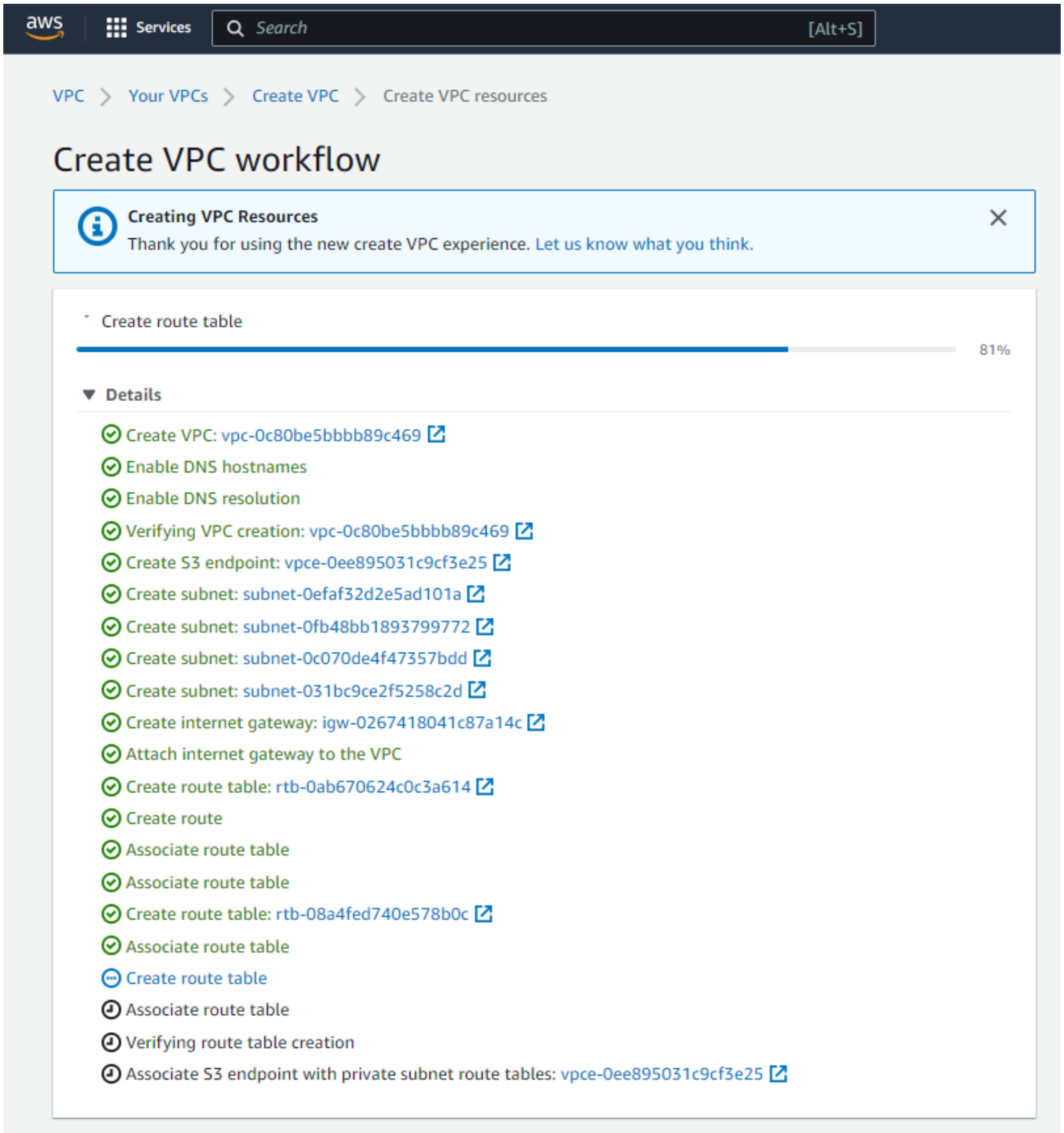
Let us know what you think.

VPC Show details
Your AWS virtual network
project-vpc

Subnets (4)
Subnets within this VPC
us-east-1a
project-subnet-public1-us-east-1a
project-subnet-private1-us-east-1a
us-east-1b
project-subnet-public2-us-east-1b
project-subnet-private2-us-east-1b

Route tables (3)
Route network traffic to resources
project-rtb-public
project-rtb-private1-us-east-1a
project-rtb-private2-us-east-1b

Network connections (2)
Connections to other networks
project-igw
project-vpce-s3



Create VPC workflow

Creating VPC Resources
Thank you for using the new create VPC experience. Let us know what you think.

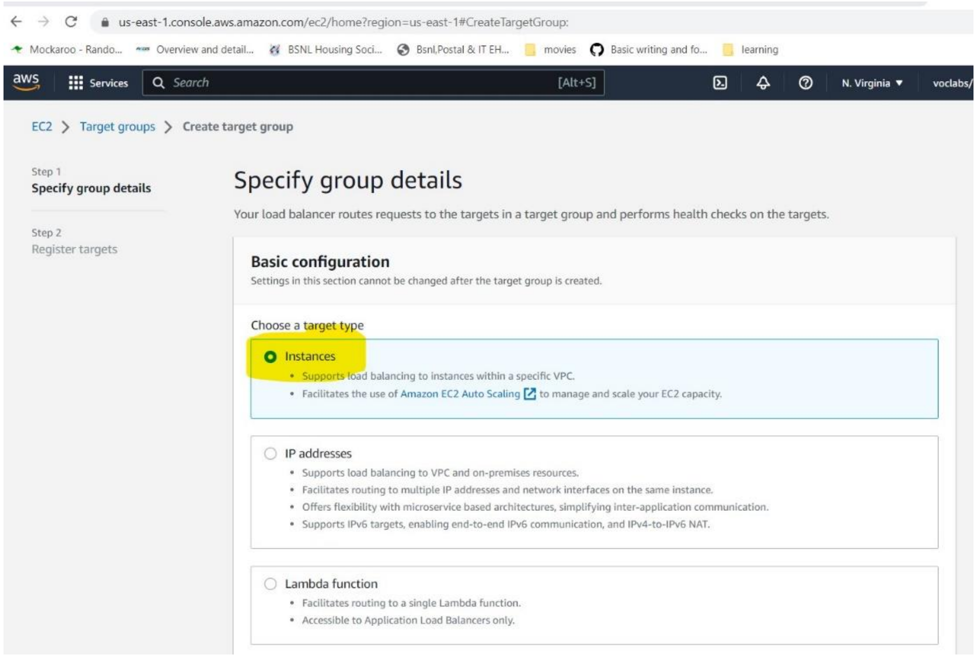
Create route table
81%

▼ Details

- ✓ Create VPC: vpc-0c80be5bbbb89c469
- ✓ Enable DNS hostnames
- ✓ Enable DNS resolution
- ✓ Verifying VPC creation: vpc-0c80be5bbbb89c469
- ✓ Create S3 endpoint: vpce-0ee895031c9cf3e25
- ✓ Create subnet: subnet-0efaf32d2e5ad101a
- ✓ Create subnet: subnet-0fb48bb1893799772
- ✓ Create subnet: subnet-0c070de4f47357bdd
- ✓ Create subnet: subnet-031bc9ce2f5258c2d
- ✓ Create internet gateway: igw-0267418041c87a14c
- ✓ Attach internet gateway to the VPC
- ✓ Create route table: rtb-0ab670624c0c3a614
- ✓ Create route
- ✓ Associate route table
- ✓ Associate route table
- ✓ Create route table: rtb-08a4fed740e578b0c
- ✓ Associate route table
- ⋯ Create route table
- ◷ Associate route table
- ◷ Verifying route table creation
- ◷ Associate S3 endpoint with private subnet route tables: vpce-0ee895031c9cf3e25

2. Create a target group

By default, the load balancer sends requests to registered targets using the port and protocol that you specified for the target group. To route traffic to the targets in a target group, specify the target group in an action when you create a listener or create a rule for your listener. Add or remove targets from your target group at any time.



Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

Basic configuration

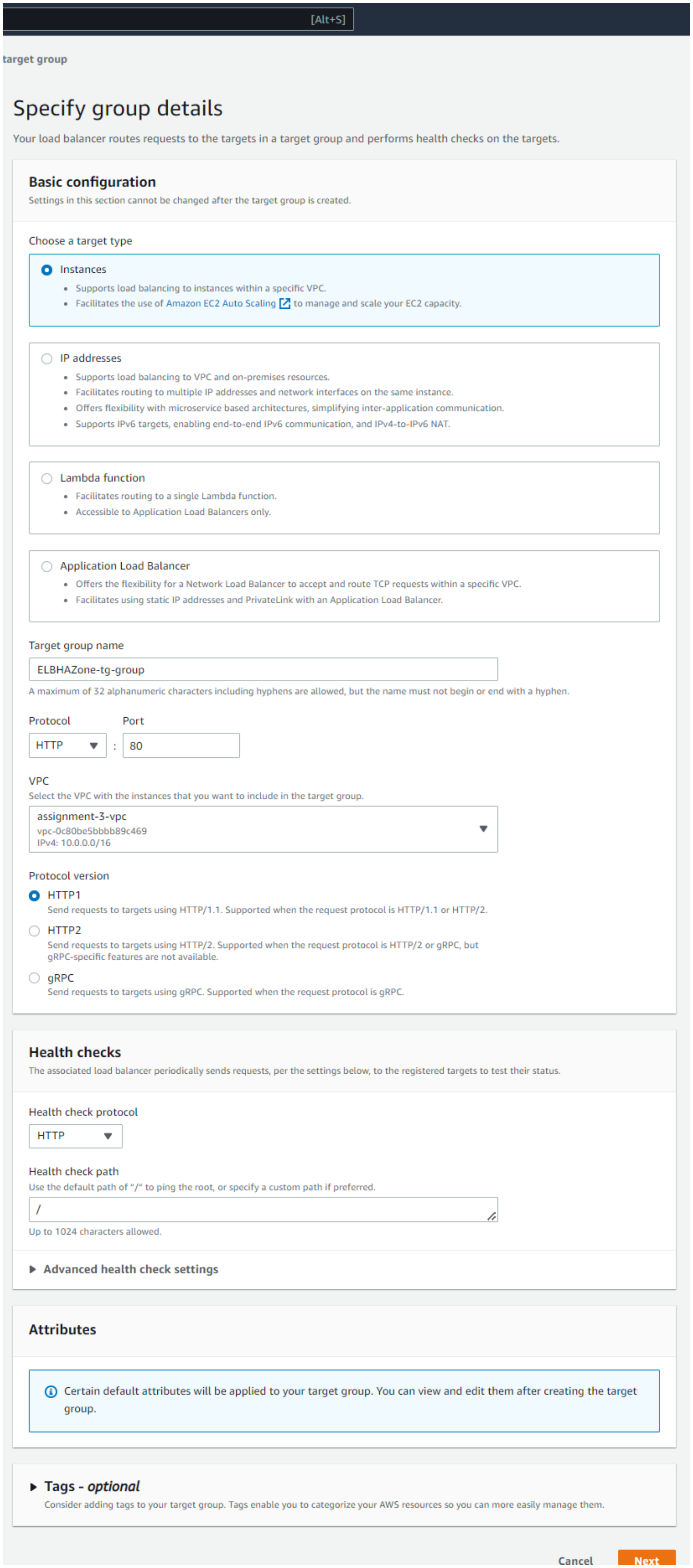
Settings in this section cannot be changed after the target group is created.

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.



target group

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 cannot 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.

○ 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

ELBHAZone-tg-group

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

VPC

Select the VPC with the instances that you want to include in the target group.

assignment-3-vpc
vpc-0c80be5bbbb89c469
IPv4: 10.0.0.0/16

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

HTTP

Health check path

Use the default path of "/" to ping 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.

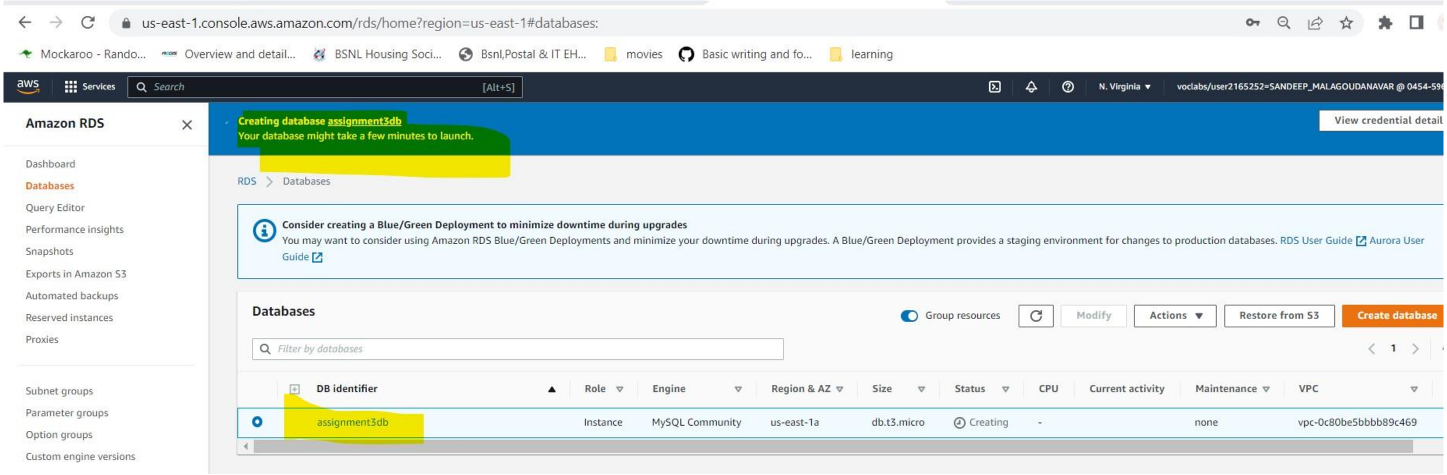
▶ Tags - *optional*

Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.

3. create a DB instance in a VPC:

Assuming already we have created VPC

1. We will create a DB subnet group
2. Create a VPC security group
3. Create a DB instance in the VPC

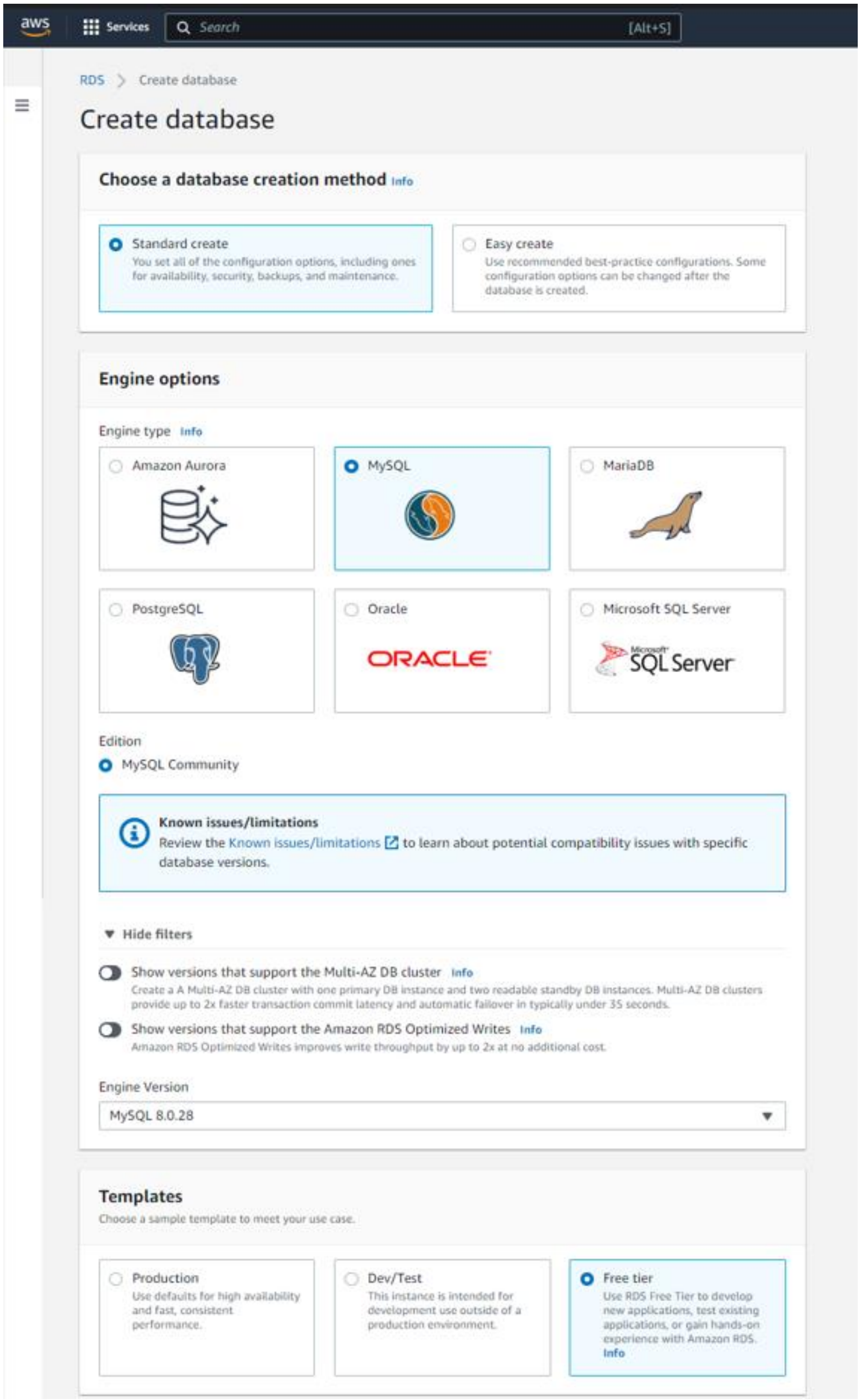


Creating database assignment3db
Your database might take a few minutes to launch.

Consider creating a Blue/Green Deployment to minimize downtime during upgrades
You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. RDS User Guide Aurora User Guide

Databases

DB identifier	Role	Engine	Region & AZ	Size	Status	CPU	Current activity	Maintenance	VPC
assignment3db	Instance	MySQL Community	us-east-1a	db.t3.micro	Creating	-		none	vpc-0c80be5bbbb89c469



Create database

Choose a database creation method Info

● Standard create
You set all of the configuration options, including ones for availability, security, backups, and maintenance.

○ Easy create
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type Info

○ Amazon Aurora
● MySQL
○ MariaDB
○ PostgreSQL
○ Oracle
○ Microsoft SQL Server

Edition
● MySQL Community

Known issues/limitations
Review the Known issues/limitations to learn about potential compatibility issues with specific database versions.

▼ **Hide filters**

Show versions that support the Multi-AZ DB cluster Info
Create a A Multi-AZ DB cluster with one primary DB instance and two readable standby DB instances. Multi-AZ DB clusters provide up to 2x faster transaction commit latency and automatic failover in typically under 35 seconds.

Show versions that support the Amazon RDS Optimized Writes Info
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

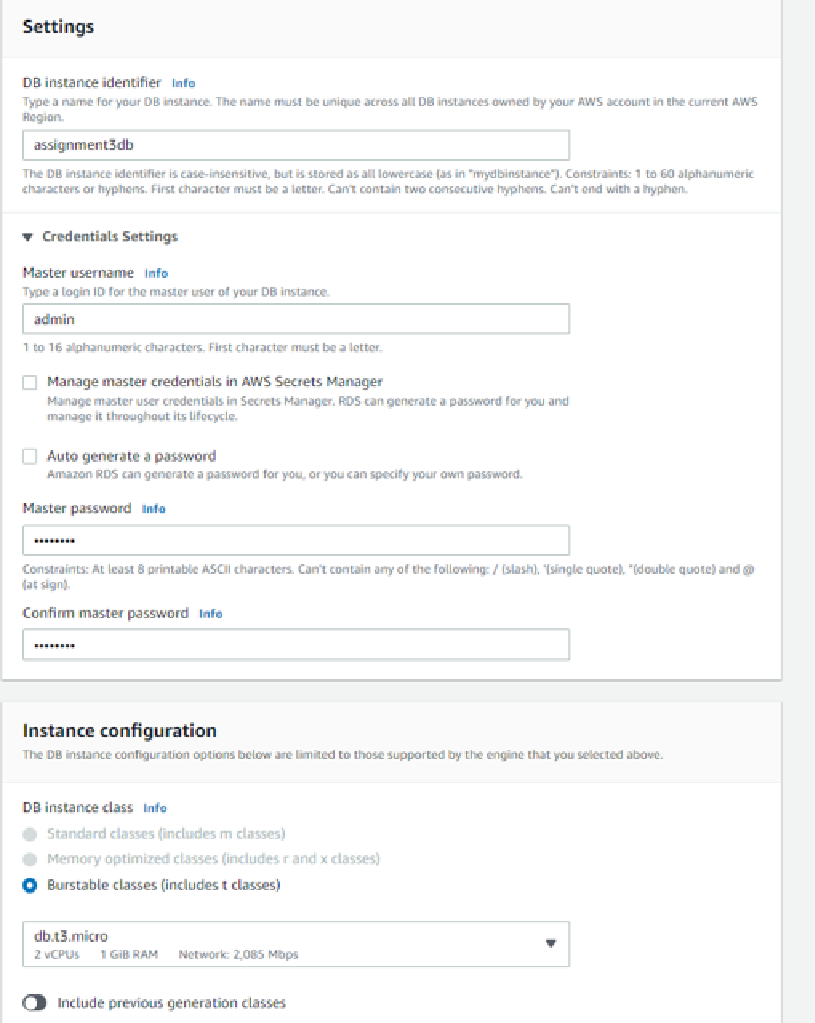
Engine Version
MySQL 8.0.28 ▼

Templates
Choose a sample template to meet your use case.

○ Production
Use defaults for high availability and fast, consistent performance.

○ Dev/Test
This instance is intended for development use outside of a production environment.

● Free tier
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS. Info



Settings

DB instance identifier Info
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

assignment3db

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

Master username Info
Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. First character must be a letter.

□ Manage master credentials in AWS Secrets Manager
Manage master user credentials in Secrets Manager. RDS can generate a password for you and manage it throughout its lifecycle.

□ Auto generate a password
Amazon RDS can generate a password for you, or you can specify your own password.

Master password Info

••••••••

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm master password Info

••••••••

Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

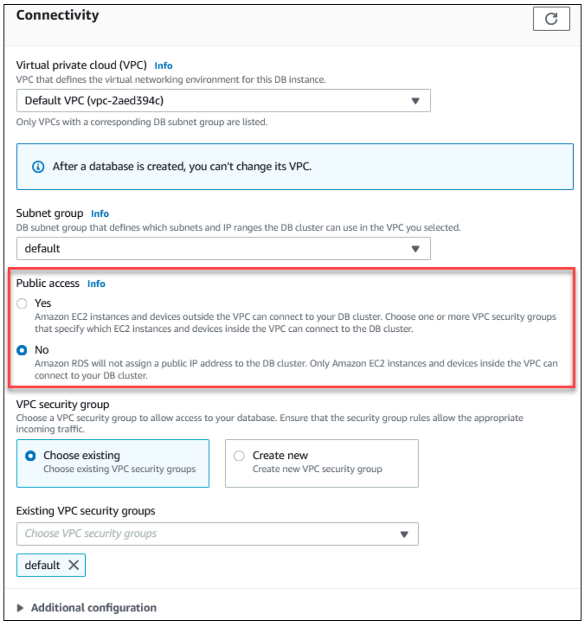
DB instance class Info

○ Standard classes (includes m classes)
○ Memory optimized classes (includes r and x classes)
● Burstable classes (includes t classes)

db.t3.micro
2 vCPUs 1 GiB RAM Network: 2,085 Mbps

Include previous generation classes

Note : Public access is set to NO. So that we can hide the DB instance from the public access.



Connectivity

Virtual private cloud (VPC) Info
VPC that defines the virtual networking environment for this DB instance.

Default VPC (vpc-2aed394c)

Only VPCs with a corresponding DB subnet group are listed.

After a database is created, you can't change its VPC.

Subnet group Info
DB subnet group that defines which subnets and IP ranges the DB cluster can use in the VPC you selected.

default

Public access Info

○ Yes
Amazon EC2 instances and devices outside the VPC can connect to your DB cluster. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the DB cluster.

● No
Amazon RDS will not assign a public IP address to the DB cluster. Only Amazon EC2 instances and devices inside the VPC can connect to your DB cluster.

VPC security group
Choose a VPC security group to allow access to your database. Ensure that the security group rules allow the appropriate incoming traffic.

● Choose existing
Choose existing VPC security groups

○ Create new
Create new VPC security group

Existing VPC security groups

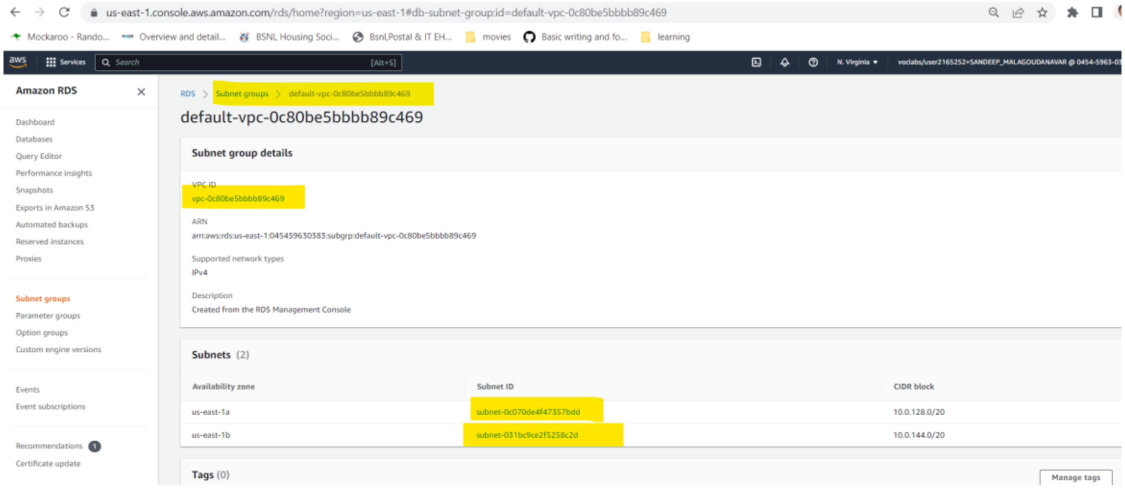
Choose VPC security groups

default ✕

▶ Additional configuration

4. create a DB subnet group

1. Open the Amazon RDS console at https://us-east-1.console.aws.amazon.com/rds/home?region=us-east-1
2. choose **Subnet groups**.
3. Choose **Create DB Subnet Group**.
4. **Name**, type the name of your DB subnet group.
5. **Description**, type a description for your DB subnet group.
6. **VPC**, choose the default VPC or the VPC that you created.
7. **Add subnets** section, choose the Availability Zones that include the subnets from **Availability Zones**, and then choose the subnets from **Subnets - private**.



default-vpc-0c80be5bbbb89c469

Subnet group details

VPC ID
vpc-0c80be5bbbb89c469

ARN
arn:aws:rds:us-east-1:045459630383:subgrp:default-vpc-0c80be5bbbb89c469

Supported network types
IPv4

Description
Created from the RDS Management Console

Subnets (2)

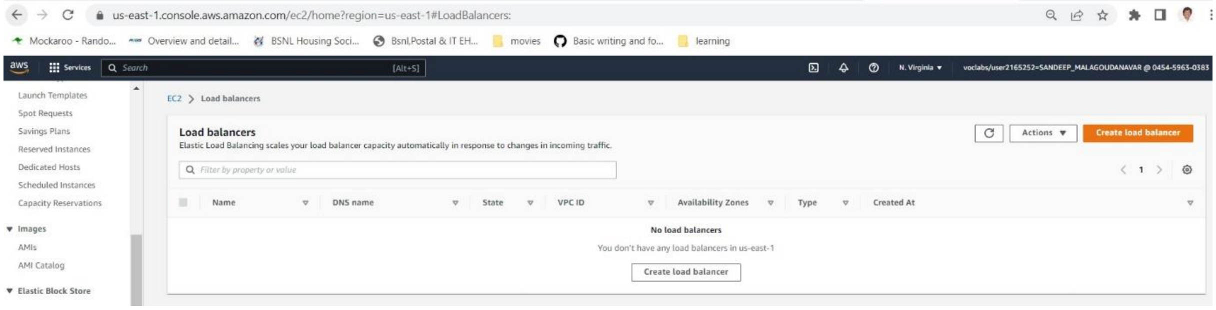
Availability zone	Subnet ID	CIDR block
us-east-1a	subnet-0c070de4f47357bdd	10.0.128.0/20
us-east-1b	subnet-031bc9ce2f5258c2d	10.0.144.0/20

Tags (0)

5. Create a load balancer using the AWS Management Console, complete the following tasks.

Configure a target group - Already we create target group.

1. Register targets
2. Configure a load balancer and a listener
3. Test the load balancer

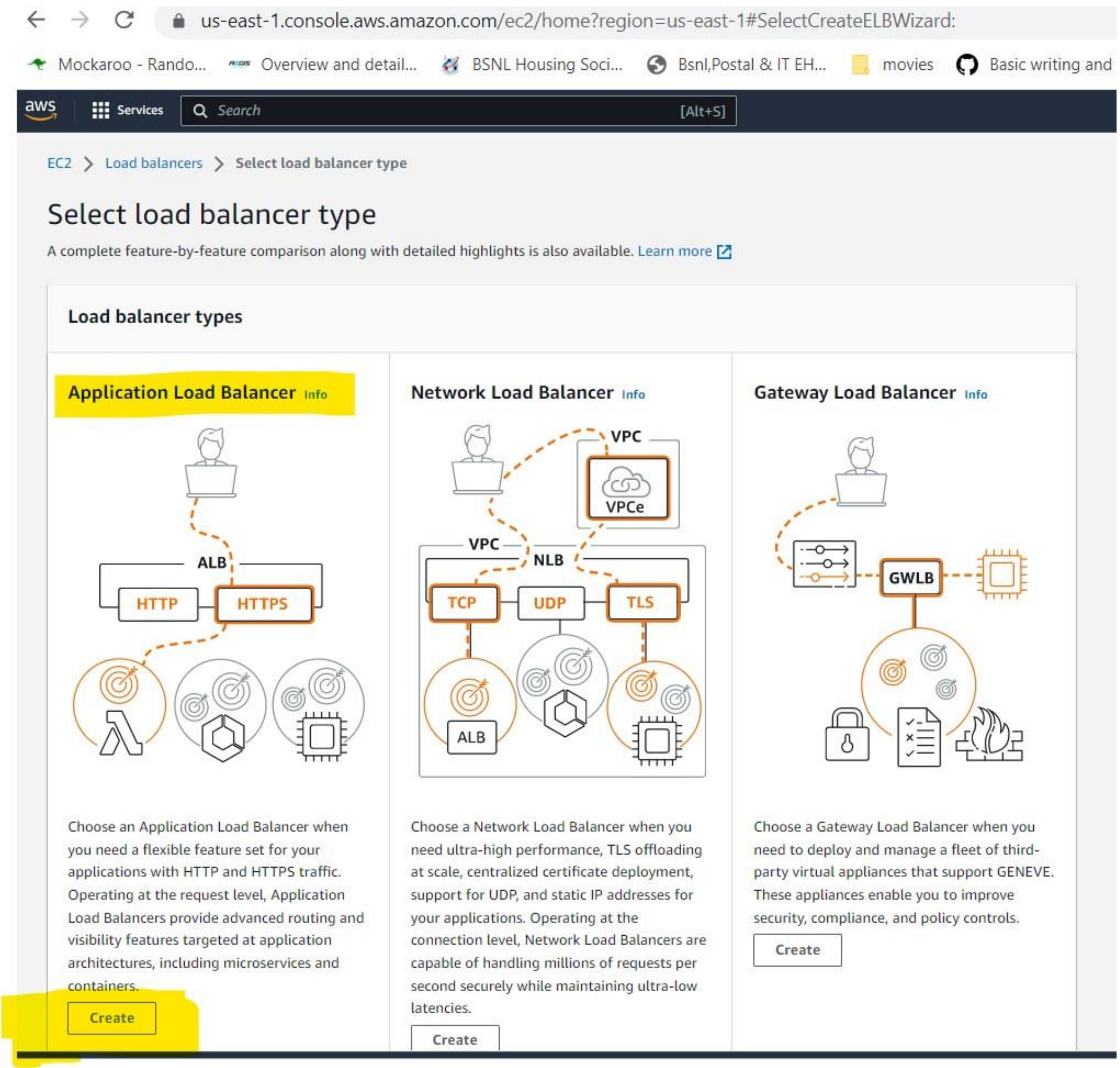


Load balancers
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At

No load balancers
You don't have any load balancers in us-east-1

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


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#SelectCreateELBWizard:
Mockaroo - Rando... Overview and detail... BSNL Housing Soci... Bsnl,Postal & IT EH... movies Basic writing and
aws Services Search [Alt+S]
EC2 > Load balancers > Select load balancer type

Select load balancer type

A complete feature-by-feature comparison along with detailed highlights is also available. Learn more

Load balancer types

Application Load Balancer Info

Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and containers.

Create

Network Load Balancer Info

Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.

Create

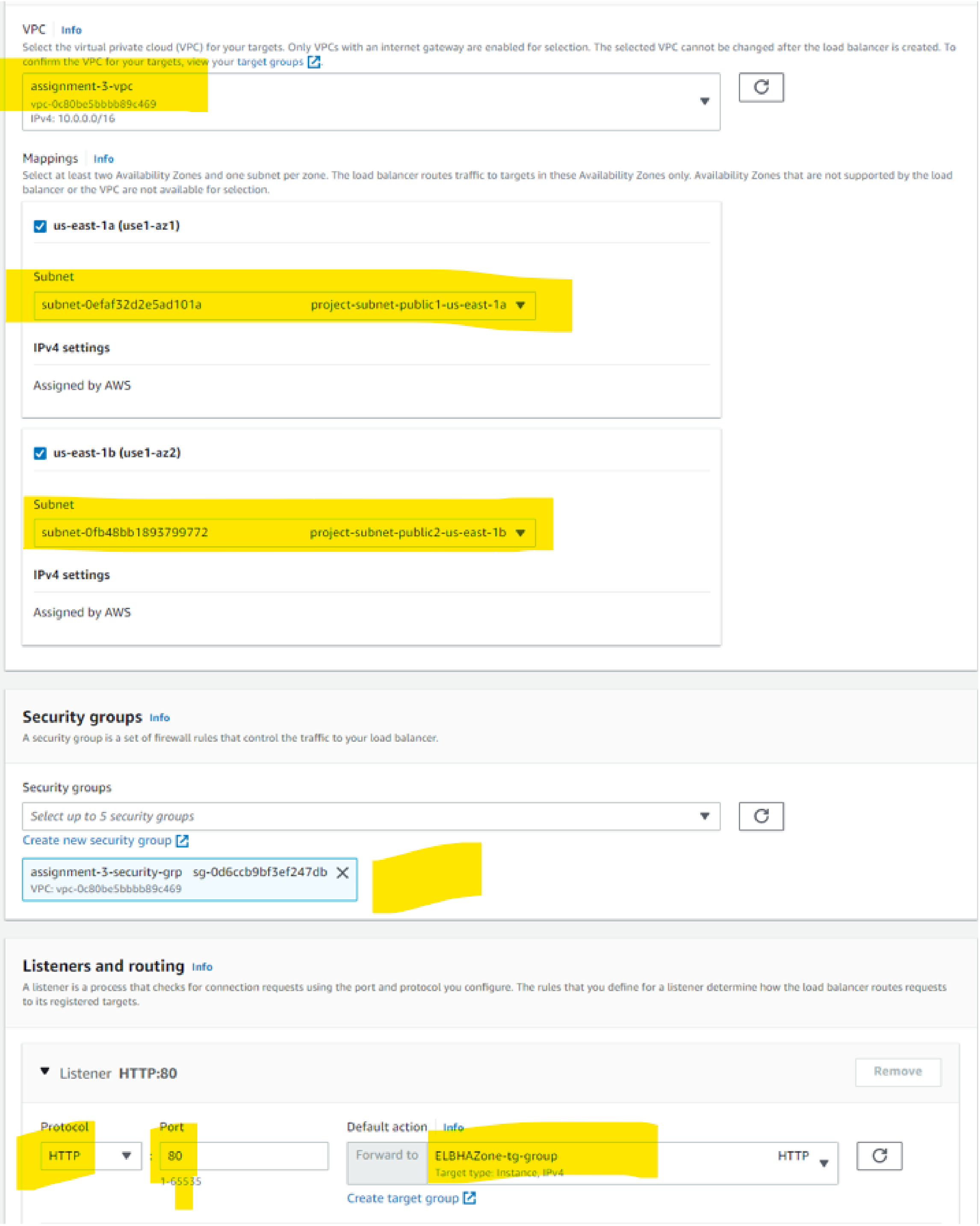
Gateway Load Balancer Info

Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.

Create

In next steps

- choose **Internet-facing** or **Internal**. An internet-facing load balancer routes requests from clients to targets over the internet. An internal load balancer routes requests to targets using private IP addresses.
- Select an existing security group
- For **Listeners and routing**, the default listener accepts HTTP traffic on port 80. You can keep the default protocol and port, or choose different ones. For **Default action**, choose the target group that you created.



VPC Info

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

assignment-3-vpc
vpc-0c80be5bbbb89c469
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-az1)

Subnet: subnet-0efaf32d2e5ad101a project-subnet-public1-us-east-1a

IPv4 settings

Assigned by AWS

☑ us-east-1b (use1-az2)

Subnet: subnet-0fb48bb1893799772 project-subnet-public2-us-east-1b

IPv4 settings

Assigned by AWS

Security groups Info

A security group is a set of firewall rules that control the traffic to your load balancer.

Security groups

Select up to 5 security groups

Create new security group

assignment-3-security-grp sg-0d6ccb9bf3ef247db ✕
VPC: vpc-0c80be5bbbb89c469

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.

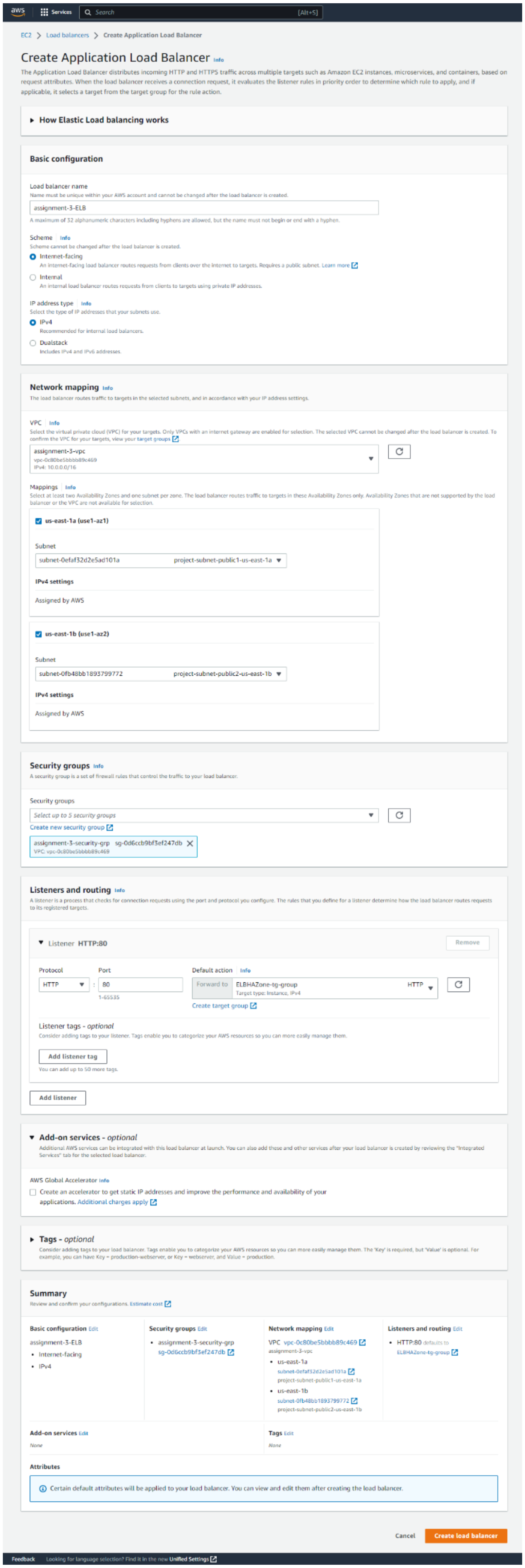
▼ Listener **HTTP:80**

Protocol: HTTP

Port: 80 (1-65535)

Default action Info: Forward to ELBHAZone-tg-group HTTP
Target type: Instance, IPv4

Create target group



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 Elastic Load balancing works

Basic configuration

Load balancer name
Name must be unique within your AWS account and cannot be changed after the load balancer is created.
assignment-3-ELB
A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme | Info
Scheme cannot 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.

IP address type | Info
Select the type of IP addresses that your subnets use.

● IPv4
Recommended for internal load balancers.

○ 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. Only VPCs with an internet gateway are enabled for selection. The selected VPC cannot be changed after the load balancer is created. To confirm the VPC for your targets, view your target groups.

assignment-3-vpc
vpc-0c80be5bbbb89c469
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-az1)

Subnet
subnet-0efaf32d2e5ad101a   project-subnet-public1-us-east-1a

IPv4 settings

Assigned by AWS

☑ us-east-1b (use1-az2)

Subnet
subnet-0fb48bb1893799772   project-subnet-public2-us-east-1b

IPv4 settings

Assigned by AWS

Security groups Info

A security group is a set of firewall rules that control the traffic to your load balancer.

Security groups
Select up to 5 security groups
Create new security group

assignment-3-security-grp   sg-0d6ccb9bf3ef247db ✕
VPC: vpc-0c80be5bbbb89c469

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	Default action Info
HTTP	80 1-65535	Forward to ELBHAZone-tg-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

▾ Add-on services - *optional*

Additional AWS services can be integrated with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the "Integrated Services" tab for the selected load balancer.

AWS Global Accelerator Info
□ Create an accelerator to get static IP addresses and improve the performance and availability of your applications. Additional charges apply

▸ 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.

Summary

Review and confirm your configurations. Estimate cost

Basic configuration Edit
assignment-3-ELB
- Internet-facing
- IPv4

Security groups Edit
- assignment-3-security-grp
  sg-0d6ccb9bf3ef247db

Network mapping Edit
VPC vpc-0c80be5bbbb89c469
assignment-3-vpc
- us-east-1a
  subnet-0efaf32d2e5ad101a
  project-subnet-public1-us-east-1a
- us-east-1b
  subnet-0fb48bb1893799772
  project-subnet-public2-us-east-1b

Listeners and routing Edit
- HTTP:80 defaults to ELBHAZone-tg-group

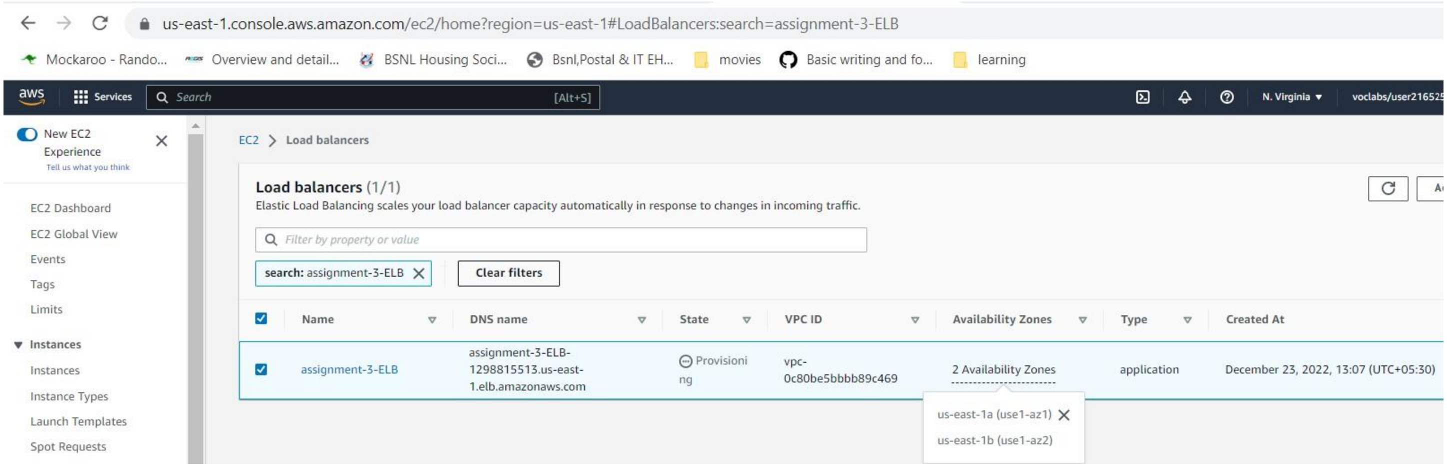
Add-on services Edit
None

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.

Cancel
Create load balancer
Feedback
Looking for language selection? Find it in the new Unified Settings



Load balancers (1/1)

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter by property or value

search: assignment-3-ELB

Clear filters

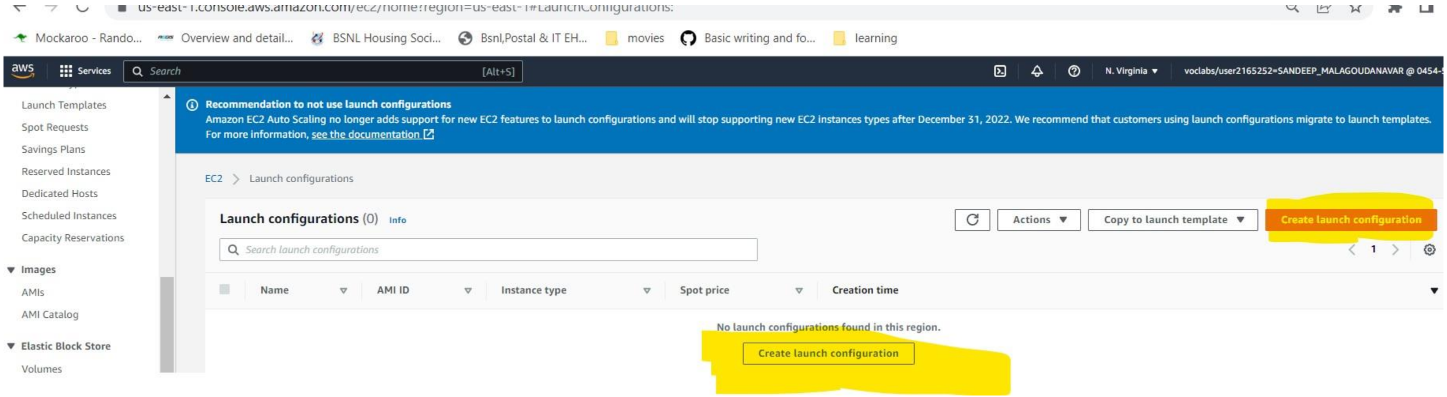
☑	Name	DNS name	State	VPC ID	Availability Zones	Type	Created At
☑	assignment-3-ELB	assignment-3-ELB-1298815513.us-east-1.elb.amazonaws.com	Provisioning	vpc-0c80be5bbbb89c469	2 Availability Zones	application	December 23, 2022, 13:07 (UTC+05:30)

us-east-1a (use1-az1)
us-east-1b (use1-az2)

6. Launch configurations

A *launch configuration* is an instance configuration template that an Auto Scaling group uses to launch EC2 instances. When you create a launch configuration, you specify information for the instances. Include the ID of the Amazon Machine Image (AMI), the instance type, a key pair, one or more security groups. You can specify your launch configuration with multiple Auto Scaling groups

- Under Auto Scaling, choose Launch Configurations.
- In the navigation bar, select your AWS Region.
- Choose Create launch configuration and enter a name for your launch configuration.
- For Amazon machine image (AMI), choose an AMI – may be our custom AMI create with webservers.



Recommendation to not use launch configurations

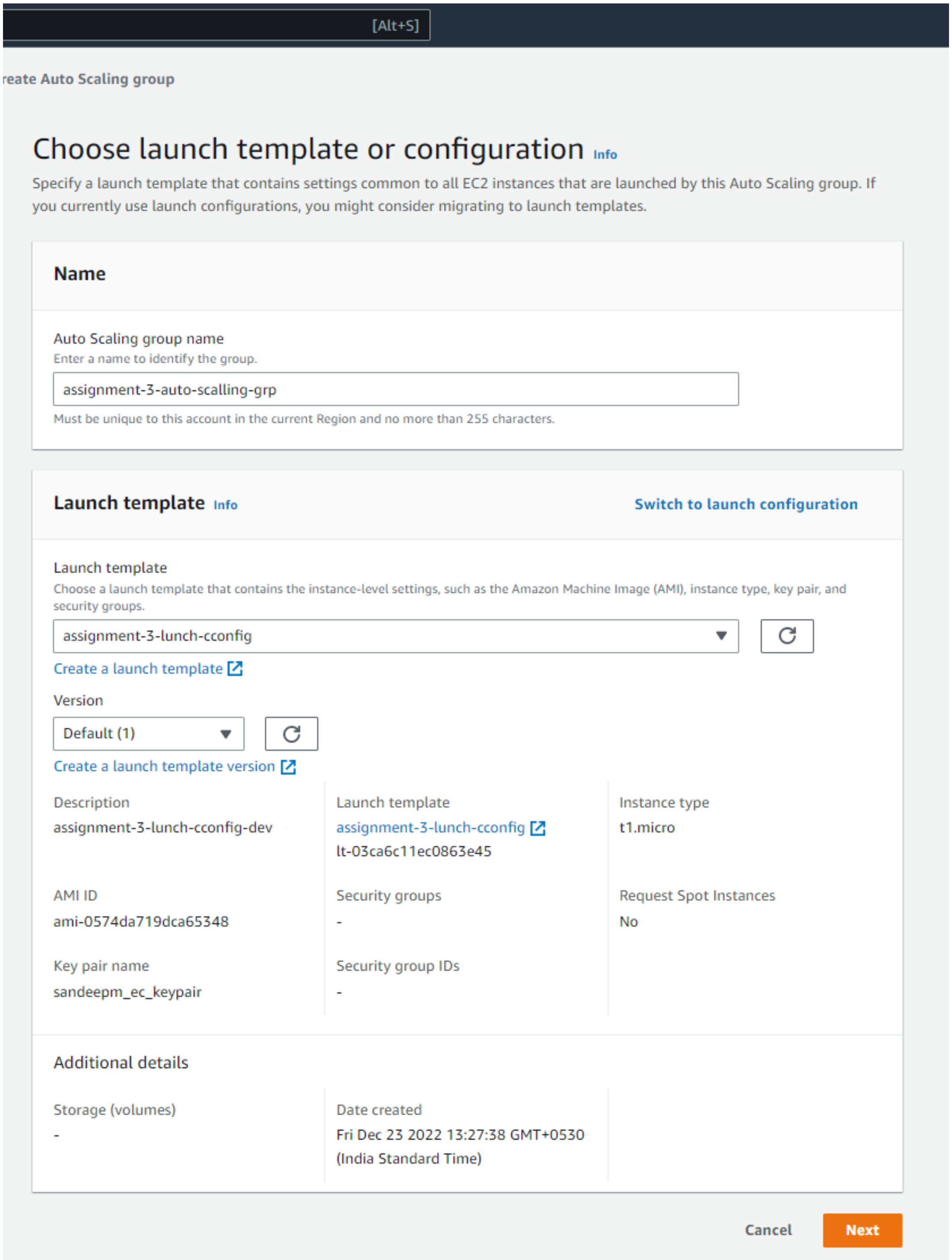
Amazon EC2 Auto Scaling no longer adds support for new EC2 features to launch configurations and will stop supporting new EC2 instances types after December 31, 2022. We recommend that customers using launch configurations migrate to launch templates. For more information, see the documentation

Launch configurations (0)

☐	Name	AMI ID	Instance type	Spot price	Creation time

No launch configurations found in this region.

Create launch configuration



reate Auto Scaling group

Choose launch template or configuration Info

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group. If you currently use launch configurations, you might consider migrating to launch templates.

Name

Auto Scaling group name
Enter a name to identify the group.

assignment-3-auto-scalling-grp

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

Launch template Info

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.

assignment-3-lunch-cconfig ▼

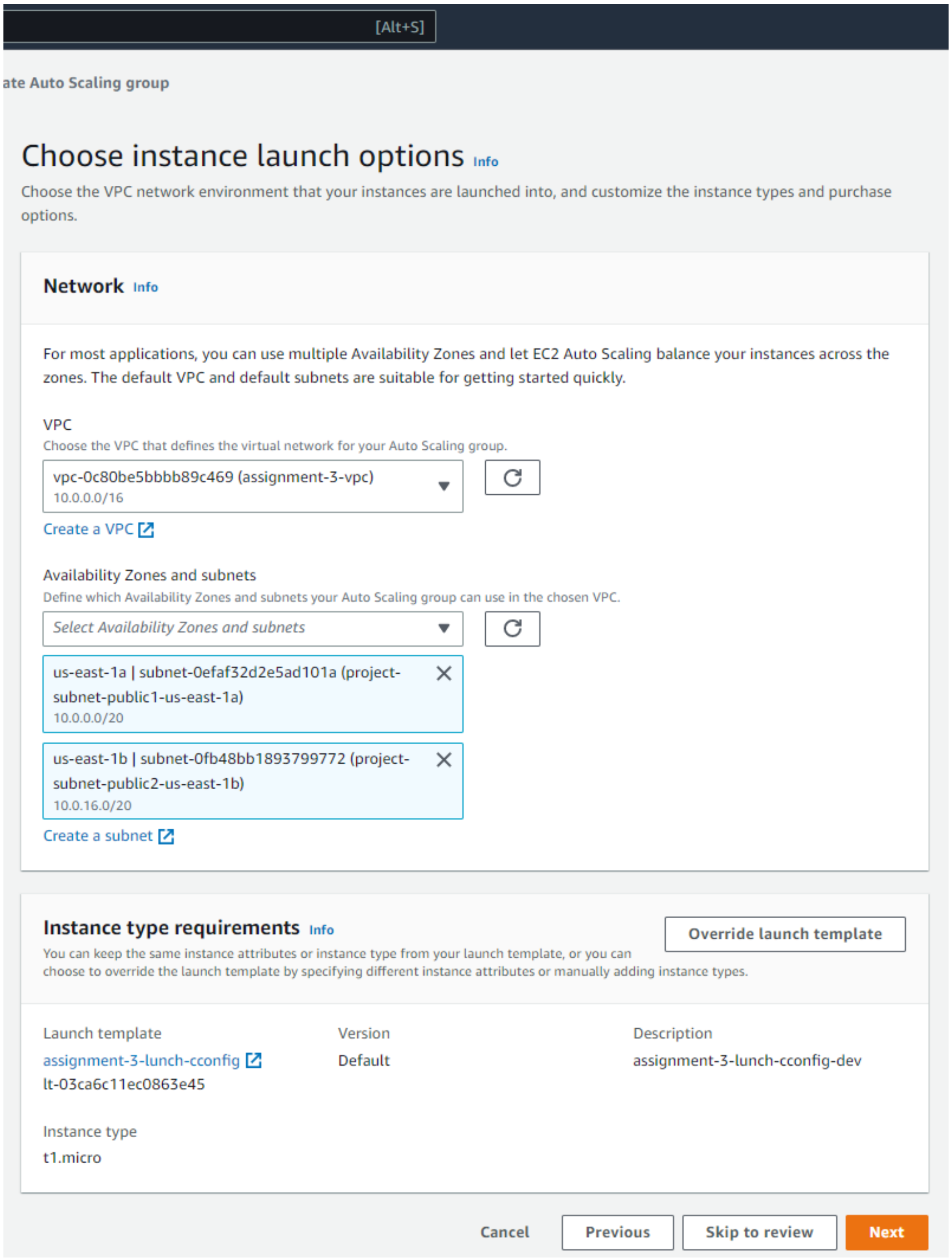
Version

Default (1) ▼

Description	Launch template	Instance type
assignment-3-lunch-cconfig-dev	assignment-3-lunch-cconfig lt-03ca6c11ec0863e45	t1.micro
AMI ID	Security groups	Request Spot Instances
ami-0574da719dca65348	-	No
Key pair name	Security group IDs	
sandeepm_ec_keypair	-	

Additional details

Storage (volumes)	Date created
-	Fri Dec 23 2022 13:27:38 GMT+0530 (India Standard Time)



ate Auto Scaling group

Choose instance launch options Info

Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.

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-0c80be5bbbb89c469 (assignment-3-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-0efaf32d2e5ad101a (project-subnet-public1-us-east-1a)
10.0.0.0/20

us-east-1b | subnet-0fb48bb1893799772 (project-subnet-public2-us-east-1b)
10.0.16.0/20

Create a subnet

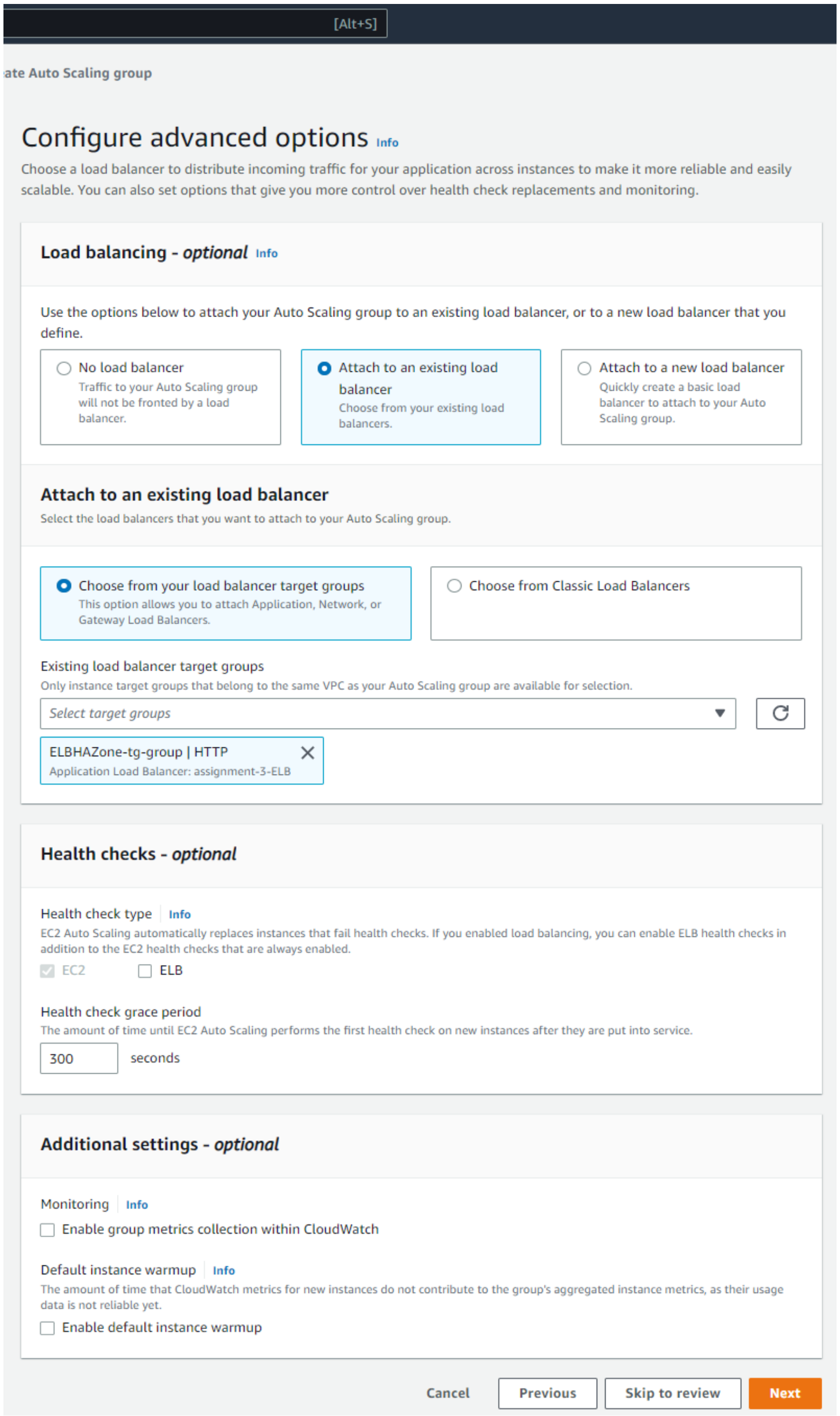
Instance type requirements Info

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	Version	Description
assignment-3-lunch-cconfig lt-03ca6c11ec0863e45	Default	assignment-3-lunch-cconfig-dev

Instance type

t1.micro



ate Auto Scaling group

Configure advanced options Info

Choose a load balancer to distribute incoming traffic for your application across instances to make it more reliable and easily scalable. You can also set options that give you more control over health check replacements and monitoring.

Load balancing - *optional* 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 ▼

ELBHAZone-tg-group | HTTP ✕
Application Load Balancer: assignment-3-ELB

Health checks - *optional*

Health check type Info
EC2 Auto Scaling automatically replaces instances that fail health checks. If you enabled load balancing, you can enable ELB health checks in addition to the EC2 health checks that are always enabled.

☑ EC2 □ ELB

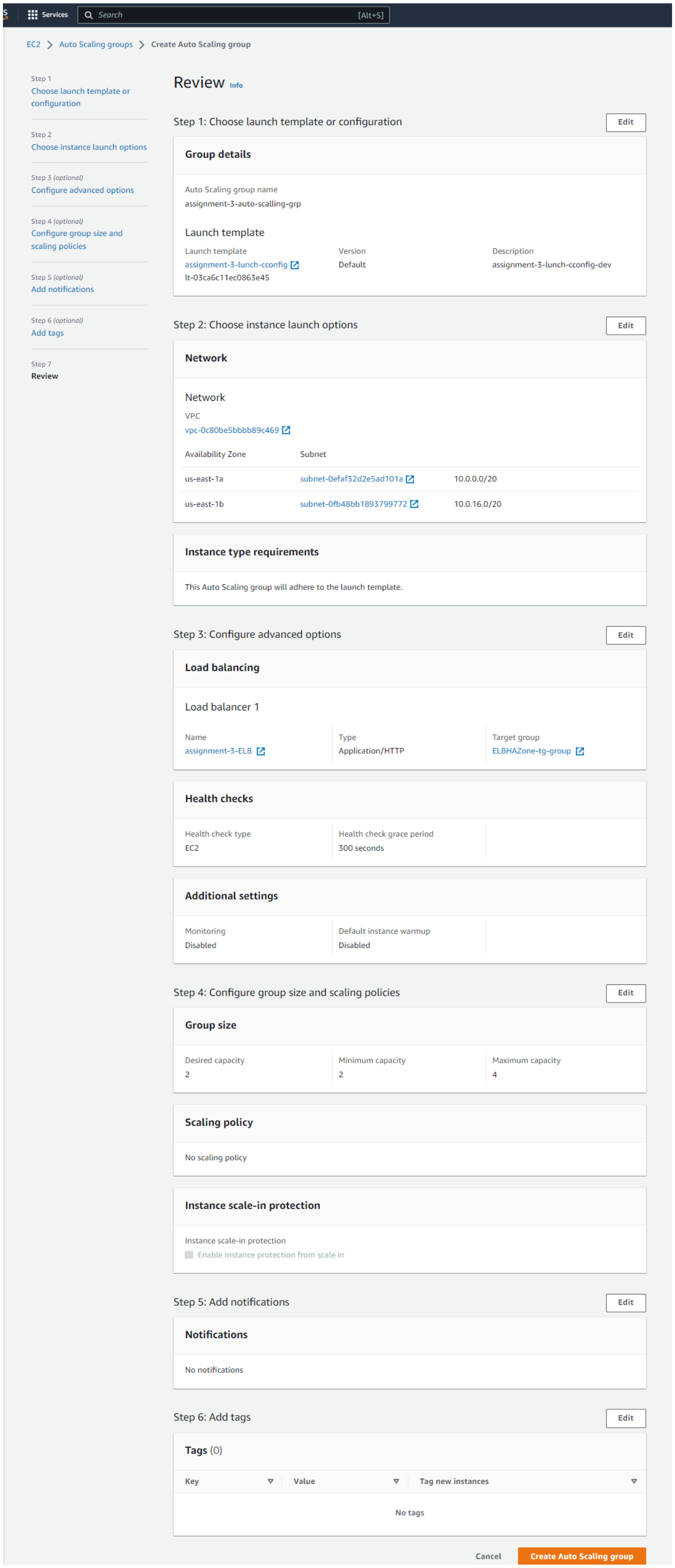
Health check grace period
The amount of time until EC2 Auto Scaling performs the first health check on new instances after they are put into service.

300 seconds

Additional settings - *optional*

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



EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1
Choose launch template or configuration
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

Review Info

Step 1: Choose launch template or configuration

Group details

Auto Scaling group name
assignment-3-auto-scalling-grp

Launch template

Launch template	Version	Description
assignment-3-lunch-cconfig lt-03ca6c11ec0863e45	Default	assignment-3-lunch-cconfig-dev

Step 2: Choose instance launch options

Network

Network
VPC
vpc-0c80be5bbbb89c469

Availability Zone	Subnet	
us-east-1a	subnet-0efaf32d2e5ad101a	10.0.0.0/20
us-east-1b	subnet-0fb48bb1893799772	10.0.16.0/20

Instance type requirements

This Auto Scaling group will adhere to the launch template.

Step 3: Configure advanced options

Load balancing

Load balancer 1

Name	Type	Target group
assignment-3-ELB	Application/HTTP	ELBHAZone-tg-group

Health checks

Health check type	Health check grace period
EC2	300 seconds

Additional settings

Monitoring	Default instance warmup
Disabled	Disabled

Step 4: Configure group size and scaling policies

Group size

Desired capacity	Minimum capacity	Maximum capacity
2	2	4

Scaling policy

No scaling policy

Instance scale-in protection

Instance scale-in protection
☐ Enable instance protection from scale in

Step 5: Add notifications

Notifications

No notifications

Step 6: Add tags

Tags (0)

Key	Value	Tag new instances

No tags