

AWS PROJECT-2

EDİZ ÖZDİL 1906811

1. Click VPC and create one.

Create VPC

Launch EC2 Instances

Note: Your Instances will launch in the US East region.

Resources by Region [Refresh Resources](#)

You are using the following Amazon VPC resources

VPCs
See all regions

US East 1

NAT Gateways
See all regions

US East 0

Subnets
See all regions

US East 6

VPC Peering Connections
See all regions

US East 0

Route Tables
See all regions

US East 1

Network ACLs
See all regions

US East 1

Internet Gateways
See all regions

US East 1

Security Groups
See all regions

US East 1

Egress-only Internet Gateways
See all regions

US East 0

Customer Gateways
See all regions

US East 0

DHCP option sets
See all regions

US East 1

Virtual Private Gateways
See all regions

US East 0

Elastic IPs
See all regions

US East 0

Site-to-Site VPN Connections
See all regions

US East 0

Endpoints
See all regions

US East 0

Running Instances
See all regions

US East 0

Endpoint Services
See all regions

US East 0

Service Health

Current Status	Details
Amazon EC2 - US East	Service is operating normally

[View complete service health details](#)

Settings

Zones

[Console Experiments](#)

Additional Information

[VPC Documentation](#)

[All VPC Resources](#)

[Forums](#)

[Report an Issue](#)

AWS Network Manager

AWS Network Manager provides tools and features to help you manage and monitor your network on AWS. Network Manager makes it easier to perform connectivity management, network monitoring and troubleshooting, IP management, and network security and governance.

[Get started with Network Manager](#)

Site-to-Site VPN Connections

Amazon VPC enables you to use your own isolated resources within the AWS Cloud, and then connect those resources directly to your own datacenter using industry-standard encrypted IPsec VPN connections.

Create VPN Connection

2. Name and create your VPC.

VPC settings

Resources to create [Info](#)

Create only the VPC resource or the VPC and other networking resources.

☐ VPC only

☒ VPC and more

Name tag auto-generation [Info](#)

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

IPv4 CIDR block [Info](#)

Determine the starting IP and the size of your VPC using CIDR notation.

10.0.0.0/16 65,536 IPs

IPv6 CIDR block [Info](#)

☒ No IPv6 CIDR block

☐ Amazon-provided IPv6 CIDR block

Tenancy [Info](#)

Default

Number of Availability Zones (AZs) [Info](#)

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 [Info](#)

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

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.

- Now: 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

VPC without Name tag

Subnets (4)

Subnets within this VPC

us-east-1a

subnet-public1-us-east-1a

subnet-private1-us-east-1a

us-east-1b

subnet-public2-us-east-1b

subnet-private2-us-east-1b

Route tables (3)

Route network traffic to resources

rtb-public

rtb-private1-us-east-1a

rtb-private2-us-east-1b

Network connections (2)

Connections to other networks

igw

vpc-s3

VPC > Your VPCs > vpc-0941d09eb45dfda70

vpc-0941d09eb45dfda70

Actions

Details [Info](#)

VPC ID

vpc-0941d09eb45dfda70

Tenancy

Default

Default VPC

No

Network Address Usage metrics

Disabled

State

Available

DHCP option set

dopt-0a970e3f22677f60c

IPv4 CIDR

10.0.0.0/16

Route 53 Resolver DNS Firewall rule groups

Failed to load rule groups

DNS hostnames

Enabled

Main route table

rtb-073e1eda14749644d

IPv6 pool

-

Owner ID

051785072338

DNS resolution

Enabled

Main network ACL

acl-01ec950d7c827aeba

IPv6 CIDR (Network border group)

-

CIDRs

Flow logs

Tags

3. Create EC2 Instance, name your instance and your instance type section.

Resources

EC2 Global view

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	0	Auto Scaling Groups	0	Dedicated Hosts	0
Elastic IPs	0	Instances	0	Key pairs	1
Load balancers	0	Placement groups	0	Security groups	2
Snapshots	0	Volumes	0		

Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Launch instance

Migrate a server

Note: Your instances will launch in the US East (N. Virginia) Region

Scheduled events

US East (N. Virginia)

No scheduled events

Service health

[AWS Health Dashboard](#)

Region

US East (N. Virginia)

Status

This service is operating normally

Zones

Zone name	Zone ID
us-east-1a	use1-az6
us-east-1b	use1-az1
us-east-1c	use1-az2
us-east-1d	use1-az4

4. Launch an instance.

Name and tags [Info](#)

Name

edizisthebest

Add additional tags

▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type

Free tier eligible

ami-0b5eea76982371e91 (64-bit (x86)) / ami-05a45a5ac837f33b7 (64-bit (Arm))

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

Description

Amazon Linux 2 Kernel 5.10 AMI 2.0.20221210.1 x86_64 HVM gp2

Architecture

AMI ID

64-bit (x86)

ami-0b5eea76982371e91

Verified provider

Number of instances [Info](#)

1

Software Image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...[read more](#)

ami-0b5eea76982371e91

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 I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch Instance

5. Select instance type and create and name your new key pair. Leave other parts and click Launch Instance.

▼ Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

vockey

Create new key pair

▼ Network settings Info

Edit

Network Info

vpc-085c3f9bd4c5cf61a

Subnet Info

No preference (Default subnet in any availability zone)

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

We'll create a new security group called 'launch-wizard-1' with the following rules:

☒ Allow SSH traffic from

Helps you connect to your instance

Anywhere

0.0.0.0/0

☐ Allow HTTPS traffic from the internet

To set up an endpoint, for example when creating a web server

☐ Allow HTTP traffic from the internet

To set up an endpoint, for example when creating a web server

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

▼ Summary

Number of instances Info

1

Software Image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...read more

ami-0b5eea76982371e91

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 I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

6. Click the Instances part and click whichever you create.

Instances (1) Info

Find instance by attribute or tag (case-sensitive)

Connect

Instance state

Actions

Launch instances

< 1 > @

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs	Monitorin
<input type="checkbox"/>	edizisthebest	i-0cb82d4f915c997dc	Pending	t2.micro	@ @	-	No alarms + us-east-1e	ec2-54-236-8-64.comp...	54.236.8.64	-	-	disabled

7. Login to the instance you create.

Connect to instance [Info](#)

Connect to your instance i-0cb82d4f915c997dc (edizisthebest) using any of these options

[EC2 Instance Connect](#) | [Session Manager](#) | [SSH client](#) | [EC2 serial console](#)

Instance ID

i-0cb82d4f915c997dc (edizisthebest)

Public IP address

54.236.8.64

User name

Enter the user name defined in the AMI used to launch the instance. If you didn't define a custom user name, use the default user name, ec2-user.

Note: In most cases, the default user name, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

[Cancel](#) [Connect](#)

8. Go to EC2 page and select the Target Groups for create Target Group.

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

▼ Images

AMIs

AMI Catalog

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

▼ Load Balancing

Load Balancers

Target Groups

▼ Auto Scaling

Launch Configurations

Auto Scaling Groups

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	1	Auto Scaling Groups	0	Dedicated Hosts	0
Elastic IPs	0	Instances	1	Key pairs	1
Load balancers	0	Placement groups	0	Security groups	3
Snapshots	0	Volumes	1		

Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

Launch instance

To get started, launch an Amazon EC2 Instance, which is a virtual server in the cloud.

[Launch instance](#) [Migrate a server](#)

Note: Your instances will launch in the US East (N. Virginia) Region

Scheduled events

US East (N. Virginia)

No scheduled events

Migrate a server

Use AWS Application Migration Service to simplify and expedite migration from

Service health

[AWS Health Dashboard](#)

Region: US East (N. Virginia) Status: This service is operating normally

Zones

Zone name	Zone ID
us-east-1a	use1-az6
us-east-1b	use1-az1
us-east-1c	use1-az2
us-east-1d	use1-az4
us-east-1e	use1-az3
us-east-1f	use1-az5

9. Create the target group.

Target groups [Info](#)

Actions

Create target group

Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
No target groups						
You don't have any target groups in us-east-1						
<div>Create target group</div>						

☒ 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

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

Protocol

Port

HTTP

:

80

VPC

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

-

vpc-085c3f9bd4c5cf61a

IPv4: 172.31.0.0/16

Protocol version

☒ HTTP1

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

☐ HTTP2

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

10. Select the Instance you create and click include as pending below and click Register for pending targets.

Register targets

This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register your targets.

Available instances (1/1)

Instance ID	Name	State	Security groups	Zone	Subnet ID
<input checked="" type="checkbox"/> i-0b82d4f915c997dc	edlissthebest	running	laund-wizard-1	us-east-1e	subnet-0bf9a727fc21cd798

1 selected

Ports for the selected instances

Ports for routing traffic to the selected instances.

1-65535 (separate multiple ports with commas)

Include as pending below

Review targets

Targets (0)

All

Remove all pending

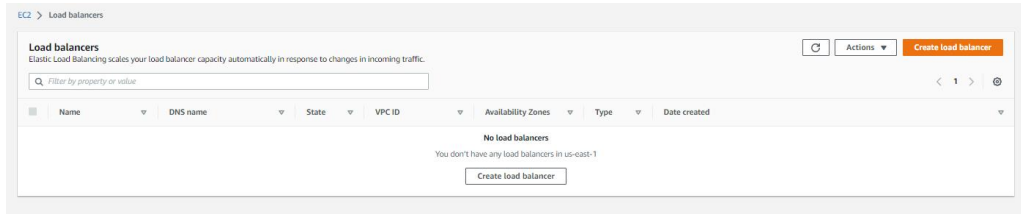
Remove	Health status	Instance ID	Name	Port	State	Security groups	Zone	Subnet ID
No instances added yet								
Specify instances above, or leave the group empty if you prefer to add targets later.								

11. Go EC2 again and come to load balancers and create one.

▼ Load Balancing

Load Balancers

Target Groups



12. Select the application load balancer.

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

13. Give your load balancer a name.

Basic configuration

Load balancer name

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

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

Scheme [info](#)

Scheme 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. [Learn more](#)

IPv4: 172.31.0.0/16

Create

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.

14. In the network mapping section, select your created VPC and 2 subnets.

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 [🔗](#).

vpc-085c3f9bd4c5cf61a

IPv4: 172.31.0.0/16

↻

Mappings [info](#)

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

☒ us-east-1a (use1-az6)

Subnet

subnet-064e87b236b3974e6

IPv4 settings

Assigned by AWS

☒ us-east-1b (use1-az1)

Subnet

subnet-0b5ba3b8b83d68458

IPv4 settings

Assigned by AWS

15. Select the target group.

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

Forward to

mytargetgroup

HTTP

1-65535

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

16. Create the load balancer.

Summary

Review and confirm your configurations. [Estimate cost](#) [🔗](#)

Basic configuration [Edit](#)

edizbalancer

Internet-facing

IPv4

Security groups [Edit](#)

default

sg-006e39af646c9fbfa [🔗](#)

Network mapping [Edit](#)

VPC [vpc-085c3f9bd4c5cf61a](#) [🔗](#)

us-east-1b

subnet-0b5ba3b8b83d68458 [🔗](#)

Listeners and routing [Edit](#)

HTTP:80 defaults to mytargetgroup [🔗](#)

HTTP:81 defaults to Target group not defined

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

17. Enter Amazon RDS to create the database.

Amazon RDS

Dashboard

Databases

Query Editor

Performance insights

Snapshots

Exports in Amazon S3

Automated backups

Reserved instances

Proxies

Subnet groups

Parameter groups

Option groups

Custom engine versions

Events

Event subscriptions

Recommendations

Certificate update

Try the new Amazon RDS Multi-AZ deployment option for MySQL and PostgreSQL.

For your Amazon RDS for MySQL and PostgreSQL workloads, improve transactional commit latencies by 2x, experience faster failover typically less than 35 seconds and, get read scalability with two readable standby DB instances by deploying the Multi-AZ DB cluster.

Create database

Or, Restore Multi-AZ DB Cluster from Snapshot

Resources

Refresh

You are using the following Amazon RDS resources in the US East (N. Virginia) region (used/quota)

DB Instances (0/40)

Allocated storage (0 TB/100 TB)

Increase DB instances limit

DB Clusters (0/40)

Reserved instances (0/40)

Snapshots (0)

Manual

DB Cluster (0/100)

DB Instance (0/100)

Automated

DB Cluster (0)

DB Instance (0)

Recent events (0)

Event subscriptions (0/20)

Parameter groups (0)

Default (0)

Custom (0/100)

Option groups (0)

Default (0)

Custom (0/20)

Subnet groups (0/50)

Supported platforms VPC

Default network vpc-085c3f9b64c5c61a

Create database

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database in the cloud.

Restore from S3

Create database

Note: your DB instances will launch in the US East (N. Virginia) region

Recommended for you

Time-Series Tables in PostgreSQL

Step-by-step guide to design high-performance time series data tables on Amazon RDS for PostgreSQL. [Learn more](#)

Implementing Cross-Region DR

Learn how to set up Cross-Region disaster recovery (DR) for Aurora PostgreSQL using an Aurora global database spanning multiple Regions. [Learn more](#)

Test Your DR Strategy in Minutes

Amazon Aurora Global Database now supports planned managed failover, making disaster recovery drills a breeze. [Learn more](#)

Migrate SSRS to RDS for SQL Server

Learn how you can migrate existing SSRS content to an Amazon RDS for SQL Server instance using a PowerShell module. [Learn more](#)

Additional information

Getting started with RDS

Overview and features

Documentation

Articles and tutorials

Data import guide for MySQL

Data import guide for Oracle

Data import guide for SQL Server

18. Choose Easy Create, MySQL and name your 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.


Configuration

Engine type [Info](#)


☐ Amazon Aurora




☒ MySQL




☐ MariaDB




☐ PostgreSQL



☐ Oracle



☐ Microsoft SQL Server



DB instance size

☐ Production

db.r6g.xlarge
4 vCPUs
32 GiB RAM
500 GiB
1.017 USD/hour

☒ Dev/Test

db.r6g.large
2 vCPUs
16 GiB RAM
100 GiB
0.231 USD/hour

☐ Free tier

db.t3.micro
2 vCPUs
1 GiB RAM
20 GiB
0.020 USD/hour

DB instance identifier

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.

edizdatabase

19. Create master username and password.

Master username [Info](#)

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

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

☐ 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](#)

20. Create database. But we have an error with this request.



Your request to create DB instance edizdatabase didn't work.



User: arn:aws:sts::051785072338:assumed-role/voclabs/user2252670=Ediz_Ozdil is not authorized to perform: rds:CreateDBInstance on resource: arn:aws:rds:us-east-1:051785072338:db:edizdatabase because no identity-based policy allows the rds:CreateDBInstance action



You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

Cancel

Create database

21. We have connected the Instance.

```
  _ | _ | _ |  
  _ | ( _ | /  Amazon Linux 2 AMI  
  _ | \ _ | _ |  
  
https://aws.amazon.com/amazon-linux-2/  
8 package(s) needed for security, out of 9 available  
Run "sudo yum update" to apply all updates.  
[ec2-user@ip-172-31-48-189 ~]$
```

i-0cb82d4f915c997dc (edizisthebest)
PublicIPs: 54.236.8.64 PrivateIPs: 172.31.48.189

My instance ID: i-0cb82d4f915c997dc

Public DNS: ec2-54-236-8-64.compute-1.amazonaws.com

Example: ssh -i "vockey.pem" ec2-user@ec2-54-236-8-64.compute-1.amazonaws.com

Account ID: 051785072338

Federated User: voclabs/user2252670=Ediz_Ozdil