

1) Create one vpc in N.virginia region.

✓ You successfully created vpc-0b03cdd70722fc884 / my-vpc-01

VPC > Your VPCs > vpc-0b03cdd70722fc884

vpc-0b03cdd70722fc884 / my-vpc-01

Actions ▼

Details Info

VPC ID vpc-0b03cdd70722fc884	State ✓ Available	Block Public Access ⊖ Off	DNS hostnames Disabled
DNS resolution Enabled	Tenancy Default	DHCP option set dopt-0e075254559b1c603	Main route table rtb-057d46b4e16e3b66d
Main network ACL acl-0a6bfbfb01e50a9ee	Default VPC No	IPv4 CIDR 130.120.0.0/24	IPv6 pool -
IPv6 CIDR (Network border group) -	Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 183631301772

Resource map | CIDRs | Flow logs | Tags | Integrations

2) Create two subnets.

One Public subnet and one private subnet.

✓ You have successfully created 1 subnet: subnet-0e2d2e82509314a58

Subnets (1) Info

Find resources by attribute or tag

Subnet ID : subnet-0e2d2e82509314a58 X Clear filters

Last updated less than a minute ago Actions ▼ Create subnet

<input type="checkbox"/>	Name	Subnet ID	State	VPC	Block Pub
<input type="checkbox"/>	my-public	subnet-0e2d2e82509314a58	✓ Available	vpc-0b03cdd70722fc884 my-v...	⊖ Off

✓ You have successfully created 1 subnet: subnet-08169ef7414090f8c

Subnets (1) Info

Find resources by attribute or tag

Subnet ID : subnet-08169ef7414090f8c X Clear filters

Last updated less than a minute ago Actions ▼ Create subnet

<input type="checkbox"/>	Name	Subnet ID	State	VPC	Block Pub
<input type="checkbox"/>	my-private	subnet-08169ef7414090f8c	✓ Available	vpc-0b03cdd70722fc884 my-v...	⊖ Off

3) Provide the IGW to the vpc.

EC2 VPC IAM S3 Athena Cloudtrail Cloudwatch

✓ The following internet gateway was created: igw-0b9b3a6a51b1bee25 - my-IGW. You can now attach to a VPC to enable the VPC to communicate with the internet. [Attach to a VPC](#) ✕

[VPC](#) > [Internet gateways](#) > Attach to VPC (igw-0b9b3a6a51b1bee25)

Attach to VPC (igw-0b9b3a6a51b1bee25) [Info](#)

VPC
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs
Attach the internet gateway to this VPC.

✕

▶ AWS Command Line Interface command

Cancel [Attach internet gateway](#)

4) Create One public RT and one private RT.

✓ Route table rtb-0c4bd4f2a5111c5e6 | my-public was created successfully. ✕

[VPC](#) > [Route tables](#) > rtb-0c4bd4f2a5111c5e6

rtb-0c4bd4f2a5111c5e6 / my-public [Actions](#) ▼

Details [Info](#)

Route table ID rtb-0c4bd4f2a5111c5e6	Main No	Explicit subnet associations -	Edge associations -
VPC vpc-0b03cdd70722fc884 my-vpc-01	Owner ID 183631301772		

[Routes](#) | [Subnet associations](#) | [Edge associations](#) | [Route propagation](#) | [Tags](#)

Routes (1) [Both](#) ▼ [Edit routes](#)

SS Athena Cloudtrail Cloudwatch

✓ Route table rtb-0d0378514961b1b0e | my-private was created successfully. ✕

[VPC](#) > [Route tables](#) > rtb-0d0378514961b1b0e

rtb-0d0378514961b1b0e / my-private [Actions](#) ▼

Details [Info](#)

Route table ID rtb-0d0378514961b1b0e	Main No	Explicit subnet associations -	Edge associations -
VPC vpc-0b03cdd70722fc884 my-vpc-01	Owner ID 183631301772		

[Routes](#) | [Subnet associations](#) | [Edge associations](#) | [Route propagation](#) | [Tags](#)

Routes (1) [Both](#) ▼ [Edit routes](#)

5) Deploy NAT gateway on public subnet and attach the NAT gateway to private subnet.

NAT gateway nat-02942f937ed6d3b53 | my-natgateway was created successfully.

VPC > NAT gateways > nat-02942f937ed6d3b53

nat-02942f937ed6d3b53 / my-natgateway

Actions

Details

NAT gateway ID nat-02942f937ed6d3b53	Connectivity type Public	State Pending	State message Info
NAT gateway ARN arn:aws:ec2:us-east-1:183631301772:natgateway/nat-02942f937ed6d3b53	Primary public IPv4 address -	Primary private IPv4 address -	Primary network interface ID -
VPC vpc-0b03cdd70722fc884 / my-vpc-01	Subnet subnet-0e2d2e82509314a58 / my-public	Created Wednesday, November 20, 2024 at 15:36:53 GMT+5:30	Deleted -

Updated routes for rtb-0d0378514961b1b0e / my-private successfully

VPC > Route tables > rtb-0d0378514961b1b0e

rtb-0d0378514961b1b0e / my-private

Actions

Details Info

Route table ID rtb-0d0378514961b1b0e	Main No	Explicit subnet associations -	Edge associations -
VPC vpc-0b03cdd70722fc884 / my-vpc-01	Owner ID 183631301772		

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (2)

Filter routes

Both

Edit routes

6) Create Two instances, one in public subnet and one in private subnet.

Instances (3) Info

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
<input type="checkbox"/>	test-server	i-0f3187e1c5141ec71	Terminated	t2.micro	-	View alarms +	us-east-1d
<input type="checkbox"/>	my-private-ser...	i-0c0331a388256d677	Running	t2.micro	Initializing	View alarms +	us-east-1a
<input type="checkbox"/>	my-public-server	i-01caf162a926a548f	Running	t2.micro	Initializing	View alarms +	us-east-1a

Select an instance

7) Deploy Apache server on both the ec2 instances with sample index.html file.

✓

```
[root@ip-130-120-0-9 html]# ls
[root@ip-130-120-0-9 html]# vi index.html
[root@ip-130-120-0-9 html]# chmod 755 index.html
[root@ip-130-120-0-9 html]# ls
index.html
[root@ip-130-120-0-9 html]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: inactive (dead)
     Docs: man:httpd.service(8)
[root@ip-130-120-0-9 html]# systemctl start httpd
[root@ip-130-120-0-9 html]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Wed 2024-11-20 10:48:52 UTC; 8s ago
     Docs: man:httpd.service(8)
  Main PID: 3534 (httpd)
    Status: "Processing requests..."
    CGroup: /system.slice/httpd.service
            └─3534 /usr/sbin/httpd -DFOREGROUND
              └─3535 /usr/sbin/httpd -DFOREGROUND
                └─3536 /usr/sbin/httpd -DFOREGROUND
                  └─3537 /usr/sbin/httpd -DFOREGROUND
                    └─3538 /usr/sbin/httpd -DFOREGROUND
                      └─3539 /usr/sbin/httpd -DFOREGROUND

Nov 20 10:48:52 ip-130-120-0-9.ec2.internal systemd[1]: Starting The Apache HTTP Server...
Nov 20 10:48:52 ip-130-120-0-9.ec2.internal systemd[1]: Started The Apache HTTP Server.
[root@ip-130-120-0-9 html]# |
```

← → ↻ ⚠ Not secure 44.211.244.130

hello world techihorize

S3AthenaCloudTrailCloudWatch

✓ Successfully created load balancer: my-load-balancer

It might take a few minutes for your load balancer to fully set up and route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.

EC2 > Load balancers > my-load-balancer

my-load-balancer

Refresh

Actions

▼ Details

Load balancer type	Status	VPC
Application	⌚ Provisioning	vpc-0b03cdd70722fc884
Scheme	Hosted zone	Availability Zones
Internet-facing	Z35SXDOTRQ7X7K	subnet-00b68e7b1fbef77a7 us-east-1c (use1-az4)
		subnet-0e2d2e82509314a58 us-east-1a (use1-az1)

1

[Configure group details](#)

2

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.

Register targets

Available instances (2)

Filter instances

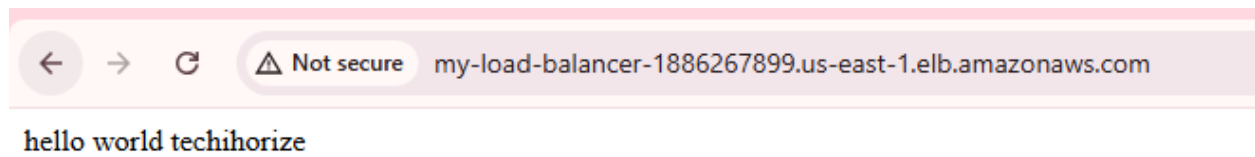
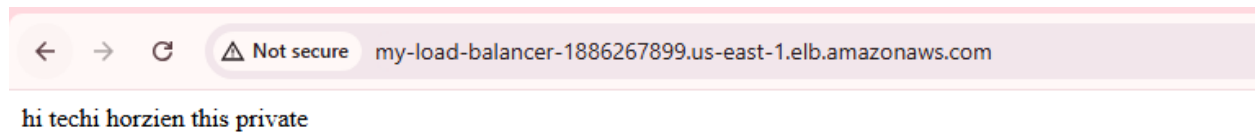
< 1 > ⚙

<input type="checkbox"/>	Instance ID	Name	State	Security groups
<input type="checkbox"/>	i-0c0331a388256d677	my-private-server	✓ Running	default
<input type="checkbox"/>	i-01caf162a926a548f	my-public-server	✓ Running	default

0 selected

Ports for the selected instances

Ports for routing traffic to the selected instances.



9) Store Application load balancer logs to s3.

[EC2](#) > [Load balancers](#)



Load balancers (1/1) **Actions** **Create load balancer**

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

<

1

>

<input checked="" type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones
<input checked="" type="checkbox"/>	my-load-balancer	 my-load-balancer-188626...	 Active	vpc-0b03cdd70722fc8...	2 Availability Zones

Load balancer: my-load-balancer ✕

Subnet-
0e2d2e82509314a58  us-
az1)

✔ DNS name copied

✔ Successfully modified load balancer attributes. ✕

EC2 > Load balancers > my-load-balancer

my-load-balancer ↻ Actions ▼

▼ Details

Load balancer type	Status	VPC	Load balancer IP address type
Application	✔ Active	vpc-0b03cdd70722fc884	IPv4
Scheme	Hosted zone	Availability Zones	Date created
Internet-facing	Z35SXDOTRQ7X7K	subnet-00b68e7b1fbef77a7 us-east-1c (use1-az4) subnet-0e2d2e82509314a58 us-east-1a (use1-az1)	November 20, 2024, 17:32 (UTC+05:30)

Load balancer ARN	DNS name Info
arn:aws:elasticloadbalancing:us-east-1:183631301772:loadbalance	mv-load-balancer-1886267899.us-east-1.elb.amazonaws.com (A R

deletion protection

Off

Monitoring

Access logs Connection logs

S3 location: load-logs-1	Off
------------------------------------------------------------------------------------------------------------------------------	-----

Connection logs

Off


```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::127311923021:root"
      },
      "Action": "s3:PutObject",
      "Resource": "arn:aws:s3:::load-logs-1/AWSLogs/183631301772/*"
    }
  ]
}
```

Amazon S3 > Buckets > load-logs-1 > AWSLogs/ > 183631301772/ > elasticloadbalancing/ > us-east-1/ > 2024/ > 11/ > 20/

20/ Copy S3 URI

Objects | Properties

Objects (4) [Info](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Find objects by prefix

< 1 >

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	183631301772_elasticloadbalancing_us-east-1_app.my-load-balancer.b1ff07702c105219_	gz	November 20, 2024, 18:50:11 (UTC+05:30)	620.0 B	Standard

10) Store the vpc flow logs to cloudwatch group.

11) Create Monitoring Dashboards to monitor cpu utilization and to monitor apache service.

12) CPU utilization is more than 70% then it should trigger Autoscaling and launch new instance.