

Elastic Load Balancing and Load Balancer

What Is Elastic Load Balancing?

Elastic Load Balancing distributes incoming application traffic across multiple EC2 instances, in multiple Availability Zones. This increases the fault tolerance of your applications.

The load balancer serves as a single point of contact for clients, which increases the availability of your application. You can add and remove instances from your load balancer as your needs change, without disrupting the overall flow of requests to your application. Elastic Load Balancing scales your load balancer as traffic to your application changes over time, and can scale to the vast majority of workloads automatically.

You can configure health checks, which are used to monitor the health of the registered instances so that the load balancer can send requests only to the healthy instances. You can also offload the work of encryption and decryption to your load balancer so that your instances can focus on their main work.

Types of Load Balancers

The screenshot shows the AWS console interface for selecting a load balancer type. The header includes the AWS logo, navigation links for Services, Resource Groups, and a user profile section. Below the header, the title 'Select load balancer type' is followed by a brief introduction: 'Elastic Load Balancing supports three types of load balancers: Application Load Balancers, Network Load Balancers (new), and Classic Load Balancers. Choose the load balancer type that meets your needs. [Learn more about which load balancer is right for you](#)'. The main content area is divided into three columns, each representing a different load balancer type. The first column, 'Application Load Balancer', features a blue header, a circular icon with 'HTTP' and 'HTTPS' text, a 'Create' button, and a description: 'Choose an Application Load Balancer when you need a flexible feature set for your web applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing, TLS termination and visibility features targeted at application architectures, including microservices and containers.' The second column, 'Network Load Balancer', has a blue header, a circular icon with 'TCP' text, a 'Create' button, and a description: 'Choose a Network Load Balancer when you need ultra-high performance and static IP addresses for your application. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second while maintaining ultra-low latencies.' The third column, 'Classic Load Balancer', has a grey header, the text 'PREVIOUS GENERATION for HTTP, HTTPS, and TCP', a 'Create' button, and a description: 'Choose a Classic Load Balancer when you have an existing application running in the EC2-Classical network.' Each column also includes a 'Learn more >' link.

Application Load Balancer

Application Load Balancer operates at the request level (layer 7) routing traffic to targets - EC2 instances, containers and IP addresses based on the content of the request. Ideal for advanced load balancing of HTTP and HTTPS traffic, Application Load Balancer provides advanced request routing targeted at delivery of modern application architectures, including microservices and container-based applications. Application Load Balancer simplifies and improves the security of your application, by ensuring that the latest SSL/TLS ciphers and protocols are used at all times.

Network Load Balancer

Network Load Balancer operates at the connection level (Layer 4) routing connections to targets - Amazon EC2 instances, containers and IP addresses based on IP protocol data. Ideal for load balancing of TCP traffic, Network Load Balancer is capable of handling millions of requests per second while maintaining ultra-low latencies. Network Load Balancer is optimized to handle sudden and volatile traffic patterns while using a single static IP address per Availability Zone. It is integrated with other popular AWS services such as Auto Scaling, Amazon EC2 Container Service (ECS), and Amazon CloudFormation.

Classic Load Balancer

Classic Load Balancer provides basic load balancing across multiple Amazon EC2 instances and operates at both the request level and connection level. Classic Load Balancer is intended for applications that were built within the EC2-Classical network. We recommend Application Load Balancer for Layer 7 and Network Load Balancer for Layer 4 when using Virtual Private Cloud (VPC).

Application ELB

1. Configure Load Balancer 2. Configure Security Settings 3. Configure Security Groups 4. Configure Routing 5. Register Targets 6. Review

Step 1: Configure Load Balancer

Basic Configuration

To configure your load balancer, provide a name, select a scheme, specify one or more listeners, and select a network. The default configuration is an internet-facing load balancer in the selected network with a listener that receives HTTP traffic on port 80.

Name

Scheme ☒ Internet-facing ☐ Internal

IP address type

Listeners

A listener is a process that checks for connection requests, using the protocol and port that you configured.

| Load Balancer Protocol | Load Balancer Port | |
|--|----------------------------------|-------------------------------------|
| <input type="text" value="HTTP"/> | <input type="text" value="80"/> | <input checked="" type="checkbox"/> |
| <input type="text" value="HTTPS (Secure HTTP)"/> | <input type="text" value="443"/> | <input checked="" type="checkbox"/> |
| <button>Add listener</button> | | |

Availability Zones

Specify the Availability Zones to enable for your load balancer. The load balancer routes traffic to the targets in these Availability Zones only. You can specify only one subnet per Availability Zone. You must specify subnets from at least two Availability Zones to increase the availability of your load balancer.

VPC

| Availability Zone | Subnet ID | Subnet IPv4 CIDR | Name |
|--|-----------------|------------------|---------|
| <input checked="" type="checkbox"/> us-east-1a | subnet-0c824951 | 10.0.0.0/24 | Subnet1 |
| <input checked="" type="checkbox"/> us-east-1b | subnet-1486ed70 | 10.0.1.0/24 | Subnet2 |

Tags

[Cancel](#) [Next: Configure Security Settings](#)

1. Configure Load Balancer 2. Configure Security Settings 3. Configure Security Groups 4. Configure Routing 5. Register Targets 6. Review

Step 2: Configure Security Settings

Select default certificate

AWS Certificate Manager (ACM) is the preferred tool to provision and store server certificates. If you previously stored a server certificate using IAM, you can deploy it to your load balancer. [Learn more](#) about HTTPS listeners and certificate management.

- Certificate type ☒ Choose a certificate from ACM (recommended)
☐ Upload a certificate to ACM (recommended)
☐ Choose a certificate from IAM
☐ Upload a certificate to IAM

[Request a new certificate from ACM](#)
AWS Certificate Manager makes it easy to provision, manage, deploy, and renew SSL Certificates on the AWS platform. ACM manages certificate renewals for you. [Learn more](#)

Certificate name

Select Security Policy

Security policy

If HTTPS is set as ELB listener you will have to specify the certificate in security settings

Ignore the warning If not using HTTPS

1. Configure Load Balancer 2. Configure Security Settings 3. Configure Security Groups 4. Configure Routing 5. Register Targets 6. Review

Step 2: Configure Security Settings

⚠ Improve your load balancer's security. Your load balancer is not using any secure listener.
If your traffic to the load balancer needs to be secure, use the HTTPS protocol for your front-end connection. You can go back to the first step to add/configure secure listeners under [Basic Configuration](#) section. You can also continue with current settings.

1. Configure Load Balancer 2. Configure Security Settings 3. Configure Security Groups 4. Configure Routing 5. Register Targets 6. Review

Step 3: Configure Security Groups

A security group is a set of firewall rules that control the traffic to your load balancer. On this page, you can add rules to allow specific traffic to reach your load balancer. First, decide whether to create a new security group or select an existing one.

Assign a security group: ☒ Create a new security group
☐ Select an existing security group

Security group name: load-balancer-wizard-1

Description: load-balancer-wizard-1 created on 2017-12-02T12:10:08.967+05:30

| Type | Protocol | Port Range | Source |
|------|----------|------------|------------------------|
| HTTP | TCP | 80 | Custom 0.0.0.0/0, ::/0 |

Add Rule

1. Configure Load Balancer 2. Configure Security Settings 3. Configure Security Groups 4. Configure Routing 5. Register Targets 6. Review

Step 4: Configure Routing

Your load balancer routes requests to the targets in this target group using the protocol and port that you specify, and performs health checks on the targets using these health check settings. Note that each target group can be associated with only one load balancer.

Target group

Target group: New target group

Name: Application-ELB-Demo-TG

Protocol: HTTP

Port: 80

Target type: Instance

The number of consecutive health check successes required before considering an unhealthy target healthy again

Health checks

Protocol: HTTP

Path: /healthcheck.html

The number of consecutive health check failures required before considering a target unhealthy

Advanced health check settings

Port: ☒ traffic port ☐ override

Healthy threshold: 2

Unhealthy threshold: 2

Timeout: 2 seconds

Interval: 5 seconds

Success codes: 200-299

The amount of time in seconds during which no response means, a failed health check

The approximate amount of time between health checks of an individual target

Register Targets

1. Configure Load Balancer 2. Configure Security Settings 3. Configure Security Groups 4. Configure Routing 5. Register Targets 6. Review

Step 5: Register Targets

Register targets with your target group. If you register a target in an enabled Availability Zone, the load balancer starts routing requests to the targets as soon as the registration process completes and the target passes the initial health checks.

Registered targets

To deregister instances, select one or more registered instances and then click Remove.

Remove

| <input type="checkbox"/> | Instance | Name | Port | State | Security groups | Zone |
|--------------------------|---------------------|---------------------|------|---------|------------------|------------|
| <input type="checkbox"/> | i-06c2e205bd1451131 | ELB-Test-Instance | 80 | running | launch-wizard-16 | us-east-1a |
| <input type="checkbox"/> | i-0f35a99ea0f95eb65 | ELB-Test-Instance-2 | 80 | running | launch-wizard-17 | us-east-1b |

Instances

To register additional instances, select one or more running instances, specify a port, and then click Add. The default port is the port specified for the target group. If the instance is already registered on the specified port, you must specify a different port.

Add to registered on port 80

Search Instances

| <input type="checkbox"/> | Instance | Name | State | Security groups | Zone | Subnet ID | Subnet CIDR |
|-------------------------------------|---------------------|---------------------|---------|------------------|------------|-----------------|-------------|
| <input checked="" type="checkbox"/> | i-06c2e205bd1451131 | ELB-Test-Instance | running | launch-wizard-16 | us-east-1a | subnet-0c824951 | 10.0.0.0/24 |
| <input checked="" type="checkbox"/> | i-0f35a99ea0f95eb65 | ELB-Test-Instance-2 | running | launch-wizard-17 | us-east-1b | subnet-1486ed70 | 10.0.1.0/24 |

EC2 Dashboard
Events
Tags
Reports
Limits

INSTANCES

Instances
Launch Templates
Spot Requests
Reserved Instances
Dedicated Hosts
Scheduled Instances

IMAGES

AMIs
Bundle Tasks

ELASTIC BLOCK STORE

Volumes
Snapshots

NETWORK & SECURITY

Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces

Create target groupActions

Filter: Search

1 to 1 of 1

| Name | Port | Protocol | Target type | VPC ID | Monitoring |
|-------------------------|------|----------|-------------|--------------|------------|
| Application-ELB-Demo-TG | 80 | HTTP | instance | vpc-a0be2cd8 | |

Target group: Application-ELB-Demo-TG

DescriptionTargetsHealth checksMonitoringTags

The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks. If demand on your targets increases, you can register additional targets. If demand on your targets decreases, you can deregister targets.

Edit

Registered targets

| Instance ID | Name | Port | Availability Zone | Status |
|---------------------|---------------------|------|-------------------|-------------|
| i-06c2e2058d1451131 | ELB-Test-Instance | 80 | us-east-1a | unhealthy ⓘ |
| i-0f35a99ea0f95eb65 | ELB-Test-Instance-2 | 80 | us-east-1b | unhealthy ⓘ |

Availability Zones

| Availability Zone | Target count | Healthy? |
|-------------------|--------------|--|
| us-east-1a | 1 | No (Availability Zone contains no healthy targets) |
| us-east-1b | 1 | No (Availability Zone contains no healthy targets) |

Both instances in the ELB Target Group are unhealthy

Create target groupActions

Filter: Search

1 to 1 of 1

| Name | Port | Protocol | Target type | VPC ID | Monitoring |
|-------------------------|------|----------|-------------|--------------|------------|
| Application-ELB-Demo-TG | 80 | HTTP | instance | vpc-a0be2cd8 | |

Target group: Application-ELB-Demo-TG

DescriptionTargetsHealth checksMonitoringTags

The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks. If demand on your targets increases, you can register additional targets. If demand on your targets decreases, you can deregister targets.

Edit

Registered targets

| Instance ID | Name | Port | Availability Zone | Status |
|---------------------|---------------------|------|-------------------|-------------|
| i-06c2e2058d1451131 | ELB-Test-Instance | 80 | us-east-1a | healthy ⓘ |
| i-0f35a99ea0f95eb65 | ELB-Test-Instance-2 | 80 | us-east-1b | unhealthy ⓘ |

Availability Zones

| Availability Zone | Target count | Healthy? |
|-------------------|--------------|--|
| us-east-1a | 1 | Yes |
| us-east-1b | 1 | No (Availability Zone contains no healthy targets) |

Instance in the us-east-1a availability zone is healthy

Create target group Actions

Filter: Search

| Name | Port | Protocol | Target type | VPC ID | Monitoring |
|-------------------------|------|----------|-------------|--------------|------------|
| Application-ELB-Demo-TG | 80 | HTTP | instance | vpc-a0be2cd8 | |

Target group: Application-ELB-Demo-TG

Description Targets Health checks Monitoring Tags

The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks. If demand on your targets increases, you can register additional targets. If demand on your targets decreases, you can deregister targets.

Edit

Registered targets

| Instance ID | Name | Port | Availability Zone | Status |
|---------------------|---------------------|------|-------------------|---------|
| i-06c2e2058d1451131 | ELB-Test-Instance | 80 | us-east-1a | healthy |
| i-0f35a99ea0f95eb65 | ELB-Test-Instance-2 | 80 | us-east-1b | healthy |

Availability Zones

| Availability Zone | Target count | Healthy? |
|-------------------|--------------|----------|
| us-east-1a | 1 | Yes |
| us-east-1b | 1 | Yes |

Now both instances are healthy

application-elb-demo-569956221.us-east-1.elb.amazonaws.com

Amazon Linux AMI Test Page

This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.

If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting www.example.com, you should send e-mail to "webmaster@example.com".

For information on Amazon Linux AMI, please visit the [Amazon AWS website](http://aws.amazon.com).

If you are the website administrator:

You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

You are free to use the image below on web sites powered by the Apache HTTP Server:

Powered by **APACHE 2.2**

After adding the index.html in /var/www/html directory.

application-elb-demo-569956221.us-east-1.elb.amazonaws.com

Apps Magic Autofill Panda-Editor-CR1... Fail to install aws-cl... AWS Policy Generator Cloudformation wit...

Heloo, awesome

Create Load Balancer

Actions

Filter: Search

| Name | DNS name | State | VPC ID | Availability Zones | Type |
|----------------------|--|--------|--------------|------------------------|-------------|
| Application-ELB-Demo | Application-ELB-Demo-569956221.us-east-1.elb.amazonaws.com | active | vpc-a0be2cd8 | us-east-1a, us-east-1b | application |

1 to 1 of 1

Load balancer: Application-ELB-Demo

Description

Listeners

Monitoring

Tags

Basic Configuration

Name

Application-ELB-Demo

ARN

arn:aws:elasticloadbalancing:us-east-1:565778023094:loadbalancer/app/Application-ELB-Demo/8fe3329dce125758

DNS name

Application-ELB-Demo-569956221.us-east-1.elb.amazonaws.com (A Record)

Scheme

Internet-facing

Type

application

Availability Zones

subnet-0c824951 - us-east-1a,
subnet-1486ed70 - us-east-1b

Creation time

December 2, 2017 at 12:26:35 PM UTC+5:30

Hosted zone

Z35SXDOTRQ7X7K

State

active

VPC

vpc-a0be2cd8

IP address type

ipv4

AWS WAF Web ACL

Edit availability zones

Note that ELB don't have a public IP

Network Interfaces

Create Load Balancer

Actions

Filter: Search

| Name | DNS name | State | VPC ID | Availability Zones | Type | Created At |
|----------------------|------------------------------|--------|--------------|------------------------|-------------|-------------------------|
| Application-ELB-Demo | Application-ELB-Demo-5699... | active | vpc-a0be2cd8 | us-east-1a, us-east-1b | application | December 2, 2017 at 12: |

1 to 1 of 1

Load balancer: Application-ELB-Demo

Description

Listeners

Monitoring

Tags

A listener checks for connection requests using its configured protocol and port, and the load balancer uses the listener rules to route requests to targets. You can add, remove, or update listeners and listener rules.

Add listener

Actions

| Listener ID | Security policy | SSL Certificate | Rules |
|---------------------------------------|-----------------|-----------------|---|
| HTTP : 80 arn...40b7b2cfda436c03 - | N/A | N/A | Default: forwarding to Application-ELB-Demo-TG View/edit rules |

ELB Listener rules

Network Load Balancer

1. Configure Load Balancer 2. Configure Routing 3. Register Targets 4. Review

Step 1: Configure Load Balancer

Basic Configuration

To configure your load balancer, provide a name, select a scheme, specify one or more listeners, and select a network. The default configuration is an Internet-facing load balancer in the selected network with a listener that receives TCP traffic on port 80.

Name ⓘ Network-Load-Balancer-Demo
Scheme ⓘ ☒ Internet-facing
☐ Internal

Listeners

A listener is a process that checks for connection requests, using the protocol and port that you configured.

| Load Balancer Protocol | Load Balancer Port |
|---|--------------------|
| TCP | 80 |
| <input type="button" value="Add listener"/> | |

Note that for Network ELB the listener protocol is always TCP

Availability Zones

Specify the Availability Zones to enable for your load balancer. The load balancer routes traffic to the targets in these Availability Zones only. You can specify only one subnet per Availability Zone. You may also add one Elastic IP per Availability Zone if you wish to have specific addresses for your load balancer.

[Click here](#) to manage your Elastic IPs.

| VPC ⓘ vpc-a0be2cd8 (10.0.0.0/16) Demo-vpc | | | | |
|--|-----------------|------------------|------------|---------|
| <input type="checkbox"/> Availability Zone | Subnet ID | Subnet IPv4 CIDR | Elastic IP | Name |
| <input checked="" type="checkbox"/> us-east-1a | subnet-0c824951 | 10.0.0.0/24 | | Subnet1 |
| <input checked="" type="checkbox"/> us-east-1b | subnet-1486ed70 | 10.0.1.0/24 | | Subnet2 |

Create target group

Actions

Filter:

| <input type="checkbox"/> | Name | Port | Protocol | Target type | VPC ID | Monitoring |
|-------------------------------------|-------------------------|------|----------|-------------|--------------|------------|
| <input type="checkbox"/> | Application-ELB-Demo-TG | 80 | HTTP | instance | vpc-a0be2cd8 | |
| <input checked="" type="checkbox"/> | Network-ELB-TG | 80 | TCP | instance | vpc-a0be2cd8 | |

Target group: Network-ELB-TG

Description

Targets

Health checks

Monitoring

Tags

Edit

Protocol

Path

Port

Healthy threshold

Unhealthy threshold

Timeout

Interval

Success codes

HTTP

/

traffic port

3

3

6

30

200-399

Note the health check endpoint its /

Create target group

Actions

Filter:

1 to 2 of 2

| <input type="checkbox"/> | Name | Port | Protocol | Target type | VPC ID | Monitoring |
|-------------------------------------|-------------------------|------|----------|-------------|--------------|------------|
| <input type="checkbox"/> | Application-ELB-Demo-TG | 80 | HTTP | instance | vpc-a0be2cd8 | |
| <input checked="" type="checkbox"/> | Network-ELB-TG | 80 | TCP | instance | vpc-a0be2cd8 | |

Target group: Network-ELB-TG

Description

Targets

Health checks

Monitoring

Tags

Edit

The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks. If demand on your targets increases, you can register additional targets. If demand on your targets decreases, you can deregister targets.

Registered targets

| Instance ID | Name | Port | Availability Zone | Status |
|---------------------|---------------------|------|-------------------|-----------|
| i-06c2e2058d1451131 | ELB-Test-Instance | 80 | us-east-1a | unhealthy |
| i-0f35a99ea0f95eb65 | ELB-Test-Instance-2 | 80 | us-east-1b | healthy |

Availability Zones

| Availability Zone | Target count | Healthy? |
|-------------------|--------------|--|
| us-east-1a | 1 | No (Availability Zone contains no healthy targets) |
| us-east-1b | 1 | Yes |

This instance don't respond to / health check endpoint with success code thats why unhealthy

Create target group Actions

Filter: Search

| Name | Port | Protocol | Target type | VPC ID | Monitoring |
|-------------------------|------|----------|-------------|--------------|------------|
| Application-ELB-Demo-TG | 80 | HTTP | instance | vpc-a0be2cd8 | |
| Network-ELB-TG | 80 | TCP | instance | vpc-a0be2cd8 | |

Target group: Network-ELB-TG

Description Targets Health checks Monitoring Tags

The load balancer starts routing requests to a newly registered target as soon as the registration process completes and the target passes the initial health checks. If demand on your targets increases, you can register additional targets. If demand on your targets decreases, you can deregister targets.

Edit

Registered targets

| Instance ID | Name | Port | Availability Zone | Status |
|---------------------|---------------------|------|-------------------|-----------|
| i-06c2e2058d1451131 | ELB-Test-Instance | 80 | us-east-1a | healthy ⓘ |
| i-0f35a99aa0f95eb65 | ELB-Test-Instance-2 | 80 | us-east-1b | healthy ⓘ |

Availability Zones

| Availability Zone | Target count | Healthy? |
|-------------------|--------------|----------|
| us-east-1a | 1 | Yes |
| us-east-1b | 1 | Yes |

After adding index.html in /var/www/html directory for other instance it becomes healthy

network-load-balancer-demo-21489fc4ecf13e94.elb.us-east-1.amazonaws.com

Apps Magic Autofill Panda-Editor-CR1... Fail to install aws-cl... AWS Policy Generator Cloudformation wit...

Heloo from Network ELB

Classic Load Balancer

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 1: Define Load Balancer

Basic Configuration

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you might create. You will also need to configure ports and protocols for your load balancer. Traffic from your clients can be routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer name: Classic-ELB-Demo

Create LB inside: vpc-a0be2cd8 (10.0.0.0/16) | Demo-vpc

Create an internal load balancer: ☐ (what's this?)

Enable advanced VPC configuration: ☒

Listener Configuration:

| Load Balancer Protocol | Load Balancer Port | Instance Protocol | Instance Port |
|------------------------|--------------------|-------------------|---------------|
| HTTP | 80 | HTTP | 80 |

Add

Select Subnets

You will need to select a Subnet for each Availability Zone where you wish traffic to be routed by your load balancer. If you have instances in only one Availability Zone, please select at least two Subnets in different Availability Zones to provide higher availability for your load balancer.

VPC vpc-a0be2cd8 (10.0.0.0/16) | Demo-vpc

| Available subnets | | | | |
|-------------------|-------------------|-----------------|-------------|---------|
| Actions | Availability Zone | Subnet ID | Subnet CIDR | Name |
| Selected subnets | | | | |
| Actions | Availability Zone | Subnet ID | Subnet CIDR | Name |
| ⊞ | us-east-1a | subnet-0c824951 | 10.0.0.0/24 | Subnet1 |
| ⊞ | us-east-1b | subnet-1486ed70 | 10.0.1.0/24 | Subnet2 |

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 1: Define Load Balancer

Basic Configuration

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer name: Classic-ELB-Demo

Create LB inside: vpc-a0be2cd8 (10.0.0.0/16) | Demo-vpc

Create an internal load balancer: ☐ (what's this?)

Enable advanced VPC configuration: ☒

Listener Configuration:

| Load Balancer Protocol | Load Balancer Port | Instance Protocol |
|--|--------------------|-------------------|
| Choose a protocol | | |
| <input checked="" type="checkbox"/> HTTP | 80 | HTTP |
| <input type="checkbox"/> HTTPS (Secure HTTP) | | |
| <input type="checkbox"/> TCP | | |
| <input type="checkbox"/> SSL (Secure TCP) | | |

Select Subnets

Note that you we can choose HTTP, HTTPs, TCP and SSL for listener configuration

aws Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 4: Configure Health Check

Your load balancer will automatically perform health checks on your EC2 instances and only route traffic to instances that pass the health check. If an instance fails the health check, it is automatically removed from the load balancer. Customize the health check to meet your specific needs.

Ping Protocol: HTTP

Ping Port: 80

Ping Path: /index.html

Advanced Details

Response Timeout: 5 seconds

Interval: 30 seconds

Unhealthy threshold: 2

Healthy threshold: 10

Cross Zone Load Balancing

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 5: Add EC2 Instances

The table below lists all your running EC2 Instances. Check the boxes in the Select column to add those instances to this load balancer.

VPC vpc-a0be2cd8 (10.0.0.0/16) | Demo-vpc

| <input checked="" type="checkbox"/> | Instance | Name | State | Security groups |
|-------------------------------------|---------------------|---------------------|---------|------------------|
| <input checked="" type="checkbox"/> | i-06c2e2058d1451131 | ELB-Test-Instance | running | launch-wizard-16 |
| <input checked="" type="checkbox"/> | i-0f35a99ea0f95eb65 | ELB-Test-Instance-2 | running | launch-wizard-17 |

Availability Zone Distribution

1 instance in us-east-1a

1 instance in us-east-1b

Cross-Zone Load Balancing distributes traffic evenly across all your back-end instances in all Availability Zones.

- ☒ Enable Cross-Zone Load Balancing
- ☒ Enable Connection Draining 300 seconds

Create Load Balancer

Actions

Filter: Search

1 to 3 of 3

| <input type="checkbox"/> | Name | DNS name | State | VPC ID | Availability Zones | Type | Created At |
|-------------------------------------|----------------------------|---|--------|--------------|------------------------|-------------|-------------------------|
| <input checked="" type="checkbox"/> | Classic-ELB-Demo | Classic-ELB-Demo-1082197870.us-east-1.elb.amazonaws.com | | vpc-a0be2cd8 | us-east-1a, us-east-1b | classic | December 2, 2017 at 2:0 |
| <input type="checkbox"/> | Network-Load-Balancer-Demo | Network-Load-Balancer-Demo-21489fc4ecf13e94.elb.us-east-1.amazonaws.com | active | vpc-a0be2cd8 | us-east-1a, us-east-1b | network | December 2, 2017 at 1:1 |
| <input type="checkbox"/> | Application-ELB-Demo | Application-ELB-Demo-569956221.us-east-1.elb.amazonaws.com | active | vpc-a0be2cd8 | us-east-1a, us-east-1b | application | December 2, 2017 at 12: |

Load balancer: Classic-ELB-Demo

Description

Instances

Health Check

Listeners

Monitoring

Tags

Migration

Connection Draining: Enabled, 300 seconds

Edit

Edit Instances

| Instance ID | Name | Availability Zone | Status | Actions |
|---------------------|---------------------|-------------------|-----------|---------------------------|
| i-06c2e2058d1451131 | ELB-Test-Instance | us-east-1a | InService | Remove from Load Balancer |
| i-0f35a99ea095eb65 | ELB-Test-Instance-2 | us-east-1b | InService | Remove from Load Balancer |

Edit Availability Zones

| Availability Zone | Subnet ID | Subnet CIDR | Instance Count | Healthy? | Actions |
|-------------------|-----------------|-------------|----------------|----------|---------------------------|
| us-east-1a | subnet-0c824951 | 10.0.0.0/24 | 1 | Yes | Remove from Load Balancer |
| us-east-1b | subnet-1486ed70 | 10.0.1.0/24 | 1 | Yes | Remove from Load Balancer |

← → ↺

classic-elb-demo-1082197870.us-east-1.elb.amazonaws.com

Apps

Magic Autofill

Panda-Editor-CR1...

Fail to install aws-cl...

AWS Policy Generator

Cloudformation wit...

Helly

Terminating multiple instances together

