

Elastic Load Balancing Documentation

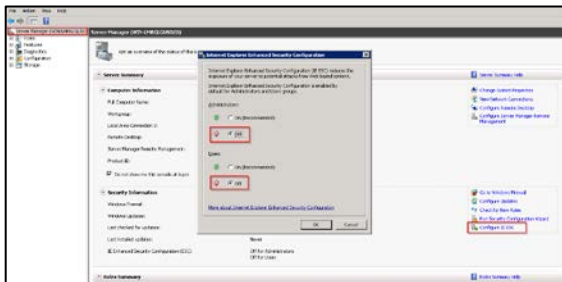
Elastic Load Balancing automatically distributes your incoming application traffic across multiple targets, such as EC2 instances. It monitors the health of registered targets and routes traffic only to the healthy targets. Elastic Load Balancing supports three types of load balancers: Application Load Balancers, Network Load Balancers, and Classic Load Balancers.

Create an Application Load Balancer

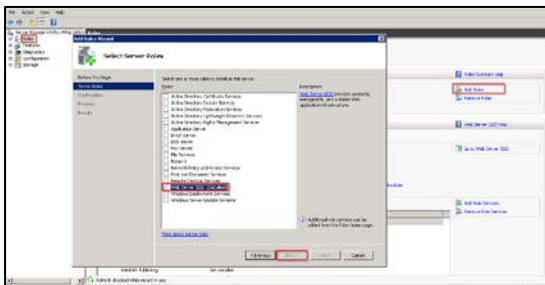
Step 1: Configure two windows server instances to check Load Balancer and a Listener

Step 2: Decrypt the password using .pem file to get the access of windows system using RDP.

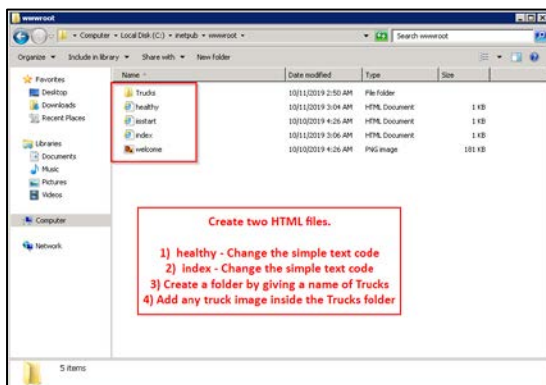
Step 3: Once you get the RDP access of Server 1 hit the Server Manager Icon beside on the taskbar.



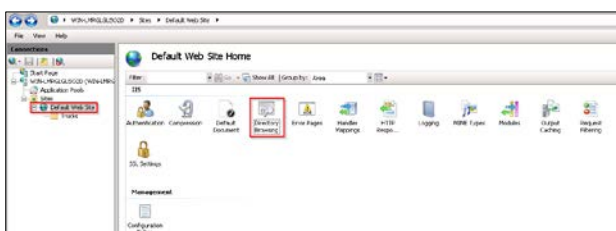
Step 4: Setup the IIS server by adding server roles.



Step 5: Once IIS is done go to. C:\inetpub\wwwroot



Step 6: Go to IIS is done go to Server 1\Sites\Default Web Site





Step 7: Please follow above the 3 to 6 steps for **Server 2**

Step 8: Create Target Groups for Your Application Load Balancers (TG1 / TG2 / TG3)

Step 9: Create another Target Groups using step 8 (TG2 & TG3)

Step 10: Configure Targets for the Target Group

Instance	Name	State	Security groups	Zone
i-0409e702e...	Server1	running	S01-Windows	us-east-1b

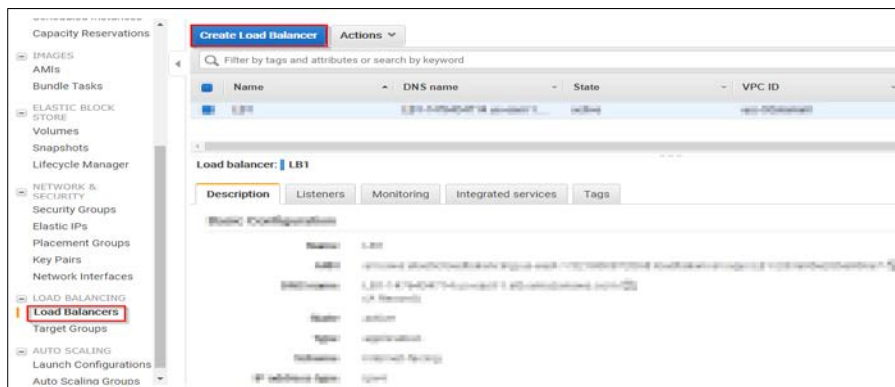
Instance	Name	State	Security	Zone	Subnet ID	Subnet CIDR
i-050f2...	Server2	run...	S01-WL...	us-east-...	subnet-99996bb7	172.31.80.0/20
i-0409e...	Server1	run...	S01-WL...	us-east-...	subnet-99996bb7	172.31.80.0/20

Registered Server 1 under TG1 group, similarly, register Server 2 under TG2 group and Server1 and Server2 under TG3 group. Save done.

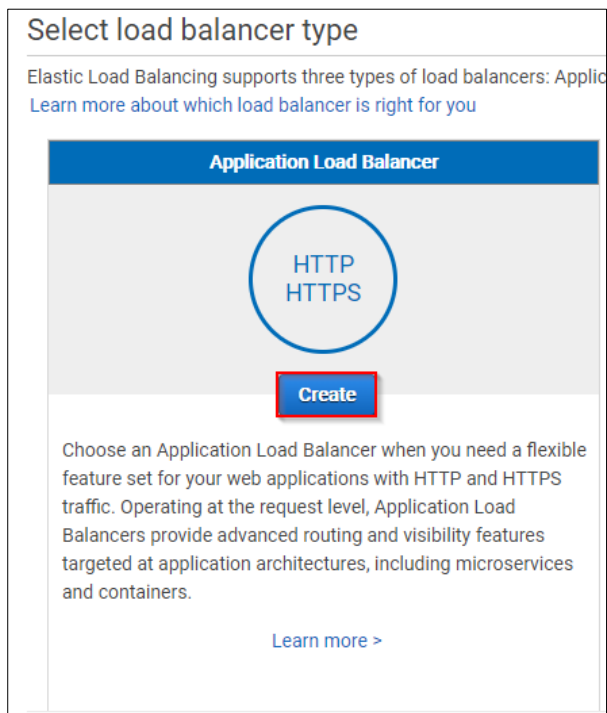
Step 11: Create the Load Balancer

After creating your load balancer, you can verify that your targets have passed the initial health check and then test that the load balancer is sending traffic to your targets.

To create the load balancer



Step 12: Select load balancer type



Step 13: 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.

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

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
HTTP	80

Add Listener

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 Zones

Availability Zone	Subnet	IPv4 address
<input checked="" type="checkbox"/> us-east-1a	<input type="text" value="subnet-cd08ecab"/>	<input type="text" value="Assigned by AWS"/>
<input checked="" type="checkbox"/> us-east-1b	<input type="text" value="subnet-9596bb7"/>	<input type="text" value="Assigned by AWS"/>
<input type="checkbox"/> us-east-1c	<input type="text" value="subnet-ff9f58b2"/>	
<input type="checkbox"/> us-east-1d	<input type="text" value="subnet-bf5860e3"/>	
<input type="checkbox"/> us-east-1e	<input type="text" value="subnet-677f04d9"/>	
<input type="checkbox"/> us-east-1f	<input type="text" value="subnet-9e53bd90"/>	

Tags

Next

Step 14: Configure Security 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

Filter: VPC security groups

Security Group ID	Name	Description	Actions
<input type="checkbox"/> sg-0639eb57	default	default VPC security group	Copy to new
<input type="checkbox"/> sg-0753a0cec23c55e2d	SG-1	launch-wizard-1 created 2019-10-10T08:04:38.482+05:30	Copy to new
<input checked="" type="checkbox"/> sg-0d592ab37ca772c31	SG1-Windows	launch-wizard-1 created 2019-10-10T09:47:56.709+05:30	Copy to new

Select your appropriate security group (when you created by creating your windows instance)

Cancel Previous Next: Configure Routing

Step 15: 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.

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:

Name:

Target type: ☒ Instance ☐ IP ☐ Lambda function

Protocol:

Port:

Health checks

Protocol:

Path:

Cancel Previous Next: Register Targets

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: Existing target group

Name: Choose an available target group

Target type: Available

Protocol: HTTP

Port:

Health checks

Protocol: HTTP

Path:

Cancel Previous **Next: Register Targets**

Create and done.

Step 16: Add listener

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.

Select the load balancer and choose **Listeners**.
For the listener to update, choose **View/edit rules**.

Create Load Balancer Actions

Filter by tags and attributes or search by keyword

Name	DNS name	State	VPC ID	Availability Zones	Type
LB1	LB1-1828420488.us-east-1....	provisioning	vpc-92a5e5e8	us-east-1b, us-east-1a	application

Load balancer: LB1

Description **Listeners** Monitoring Integrated services 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 Edit Delete

Listener ID	Security policy	SSL Certificate	Rules
HTTP : 80 arn:...04c49a737f53fc4b	N/A	N/A	Default: forwarding to TG1 View/edit rules

Choose the **Add rules** icon (the plus sign) in the menu bar, which adds **Insert Rule** icons at the locations where you can insert a rule in the priority order.

< Rules **+** Rules LB1 | HTTP:80

Click a location for your new rule. Each rule must include one action of type forward, redirect, fixed response.

Cancel **Save**

LB1 | HTTP:80 (2 rules)

Rule limits for condition values, wildcards, and total rules.

Insert Rule

RULE ID	IF (all match)	THEN
1 A rule ID (ARN) is generated when you save your rule.	<p>Path...</p> <p>is /Bikes/*</p> <p>or Value</p> <p>+</p>	<p>1. Forward to...</p> <p>TG2</p> <p>+</p>

To add a path condition, choose **Add condition**, **Path** and type the path pattern (for example, /img/*). To save the condition, choose the checkmark icon.

Add one of the following actions:

To add a forward action, choose **Add action**, **Forward to** and choose a target group **TG2**. To save the action, choose the checkmark icon.

Choose **Save**.

New rule was created successfully.

You can check the status for Health Checks for Your Target Groups

Target group: TG1

Targets

Registered targets

Instance ID	Name	Port	Availability Zone	Status
i-0409e702e7d5a2d4f	Server1	80	us-east-1b	healthy

Step 17: Click on load balancer – Description – copy the DNS name and check in your browser if default web page is loading or not.

Load balancer: LB1

Description

Basic Configuration

Name: LB1

ARN: arn:aws:elasticloadbalancing:us-east-1:521800872068:loadbalancer/app/LB1/9b0797aaeabe71ac

DNS name: **lb1-1828420488.us-east-1.elb.amazonaws.com**

State: active

Type: application

Scheme: internet-facing

IP address type: ipv4

← → ↻ ⓘ Not secure | lb1-1828420488.us-east-1.elb.amazonaws.com

This is my Server 1 index page

Try 1 - <http://lb1-1828420488.us-east-1.elb.amazonaws.com/Trucks/>

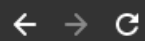
← → ↻ ⓘ Not secure | lb1-1828420488.us-east-1.elb.amazonaws.com/Trucks/

lb1-1828420488.us-east-1.elb.amazonaws.com - /Trucks/

[To Parent Directory]

10/11/2019 2:49 AM **159267 11.jpg**

Try 2 - <http://lb1-1828420488.us-east-1.elb.amazonaws.com/Bikes/>



Not secure | lb1-1828420488.us-east-1.elb.amazonaws.com/Bikes/

lb1-1828420488.us-east-1.elb.amazonaws.com - /Bikes/

[\[To Parent Directory\]](#)

10/11/2019 3:00 AM

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