

# Ec2, Load balancer, EIP & AMI exercise

## Create 1 ec2 instance with centos 6 AMI.

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Categories

All Categories

Software Infrastructure (155)

Developer Tools (7)

Business Software (5)

Operating System

All Linux/Unix

Amazon Linux (6)

CentOS (150)

CentOS 7 (x86\_64) - with Updates HVM

★★★★★ (44) | 1602 | Sold by Centos.org

\$0.00/hr for software + AWS usage fees

Linux/Unix, CentOS 7 | 64-bit Amazon Machine Image (AMI) | Updated: 2/26/16

This is the Official CentOS 7 x86\_64 HVM image that has been built with a minimal profile, suitable for use in HVM instance types only. The image contains just enough packages to ...

More info

CentOS 6 (x86\_64) - with Updates HVM

★★★★★ (32) | 1602 | Sold by Centos.org

\$0.00/hr for software + AWS usage fees

Linux/Unix, CentOS 6 | 64-bit Amazon Machine Image (AMI) | Updated: 2/26/16

This is the Official CentOS 6 x86\_64 HVM image that has been built with a minimal profile. The image contains just enough packages to run within AWS, bring up an SSH Server and ...

More info

CentOS 6.5 (x86\_64) - Release Media

★★★★★ (55) | 6.5 - 2013-12-01 | Sold by Centos.org

Select

Select

Select

Feedback English

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Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
0	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
1	General purpose	t2.micro	1	1	EBS only	-	Low to Moderate	Yes
2	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
3	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
4	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
5	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
6	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
7	General purpose	m4.large	2	8	EBS only	Yes	Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Feedback English

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**Step 3: Configure Instance Details**

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

**Number of instances**: 1 [Launch into Auto Scaling Group](#)

**Purchasing option**: Request Spot Instances

**Network**: vpc-9610c2f2 (default) [Create new VPC](#)

**Subnet**: No preference (default subnet in any Availability Zone) [Create new subnet](#)

**Auto-assign Public IP**: Use subnet setting (Enable)

**IAM role**: None [Create new IAM role](#)

**Shutdown behavior**: Stop

**Enable termination protection**: Protect against accidental termination

**Monitoring**: Enable CloudWatch detailed monitoring Additional charges apply.

**Tenancy**: Shared - Run a shared hardware instance Additional charges will apply for dedicated tenancy.

[Advanced Details](#)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

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**Step 4: Add Storage**

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/sda1	snap-f711c830	8	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Tags](#)

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**Step 5: Add Tags**

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. [Learn more](#) about tagging your Amazon EC2 resources.

Key	(127 characters maximum)	Value	(255 characters maximum)
Name		elbtestproj-web1	<input type="button" value="X"/>
<a href="#">Add another tag</a> (Up to 50 tags maximum)			

**Step 6: Configure Security Group**

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group:

- Create a new security group
- Select an existing security group

Security group name:	elbtestproj-SG		
Description:	elbtestproj-SG		
Type	Protocol	Port Range	Source
SSH	TCP	22	My IP 183.82.216.42/32
HTTP	TCP	80	Anywhere 0.0.0.0/:/0

[Add Rule](#)

[Cancel](#) [Previous](#) [Review and Launch](#)

[Feedback](#) [English](#)

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**Step 7: Review Instance Launch**

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

**AMI Details**

**CentOS 6 (x86\_64) - with Updates HVM**  
Free tier eligible  
CentOS Linux 6 x86\_64 HVM EBS 1602  
Root Device Type: ebs Virtualization type: hvm

**Hourly Software Fees:** \$0.00 per hour on t2.micro instance (Additional taxes may apply.)  
Software charges will begin once you launch this AMI and continue until you terminate the instance.

By launching this product, you will be subscribed to this software and agree that your use of this software is subject to the pricing terms and the seller's End User License Agreement.

**Instance Type**

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

**Security Groups**

**elbtestproj-SG**  
elbtestproj-SG

Type	Protocol	Port Range	Source

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**AMI Details**

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By launching this product, you will be subscribed to this software and agree that your use of this software is subject to the pricing terms and the seller's End User License Agreement.

**Instance Type**

Instance Type	ECUs	vCPUs
t2.micro	Variable	1

**Security Groups**

**elbtestproj-SG**  
elbtestproj-SG

**Select an existing key pair or create a new key pair**

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair  
Key pair name: elbtestproj-ncalifornia  
**Download Key Pair**

You have to download the **private key file (\*.pem file)** before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

**Cancel** **Launch Instances**

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The screenshot shows the AWS EC2 Instances page. On the left sidebar, under the 'INSTANCES' section, 'Instances' is selected. The main content area displays a table of instances. One instance is listed:

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Pub
elbtestproj-web1	i-0e240d9ab028759f1	t2.micro	us-west-1a	running	Initializing	None	ec2-54-241-145-82.us-west-1.compute.amazonaws.com	54.241.1

Below the table, there is a detailed view for the selected instance:

Instance: i-0e240d9ab028759f1 (elbtestproj-web1) Public DNS: ec2-54-241-145-82.us-west-1.compute.amazonaws.com

Description Status Checks Monitoring Tags Usage Instructions

Instance ID: i-0e240d9ab028759f1	Public DNS (IPv4): ec2-54-241-145-82.us-west-1.compute.amazonaws.com
Instance state: running	IPv4 Public IP: 54.241.145.82

Feedback English Show all

## Assign Elastic IP

Refer to above screenshot, the instance got a public IP but this IP is dynamic and changes after every reboot of the instance. We need to assign an Elastic IP to this instance which is static and does not change.

The screenshot shows the AWS Elastic IPs page. On the left sidebar, under the 'NETWORK & SECURITY' section, 'Elastic IPs' is selected. The main content area displays a message: "You do not have any Addresses in this region". Below this message is a button labeled "Allocate new address".

Allocate new address Actions

Filter by attributes or search by keyword

You do not have any Addresses in this region

Click the Create Address button to create your first Address

Allocate new address

Feedback English Show all

EC2 Management EC2 Management

https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#AllocateAddress:

Services Resource Groups

Addresses > Allocate new address

New address request succeeded

Elastic IP 52.8.24.26

Close

This screenshot shows the AWS EC2 Management console. A modal window is open, indicating a 'New address request succeeded' for an 'Elastic IP' with the address '52.8.24.26'. The background shows the main EC2 dashboard with various service links like EC2 Dashboard, Events, Tags, Reports, Limits, Instances, AMIs, and more.

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Show all

This screenshot shows the main EC2 Management console dashboard. It includes a feedback link, language selection (English), copyright information, and links to privacy policy and terms of use. Below the header is a search bar and a 'Show all' button.

EC2 Management EC2 Management

https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#AddressScope=Public

Services Resource Groups

Allocate new address Actions

Release addresses Associate address

Disassociate address Move to VPC scope Restore to EC2 scope

Instance Private IP address Scope Public DNS Network Interface ID

vpc

Elastic IP: 52.8.24.26

Description

Elastic IP 52.8.24.26 Allocation ID eipalloc-8a3d18b0

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Show all

This screenshot shows the detailed view of an Elastic IP address (52.8.24.26). It displays the allocation ID (eipalloc-8a3d18b0) and provides options for managing the address (Release addresses, Associate address, Disassociate address, Move to VPC scope, Restore to EC2 scope). The background shows the EC2 Management console interface with various service links.

Select the instance OR network interface to which you want to associate this Elastic IP address (52.8.24.26)

Resource type  Instance  Network interface

Instance

Private IP	Instance ID	Name	State
	i-0e240d9ab028759f1	elbtestproj-web1	running

Reassociation  Allow Elastic IP to be reassigned if already attached

**Warning**  
If you associate an Elastic IP address with your instance, your current public IP address is released. [Learn more](#).

\* Required

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```
elbtestproj-ncalifornia.pem ^
```

## Login to the instance

```
imran@DevOps:~/keys$ ssh -i elbtestproj-ncalifornia.pem centos@52.8.24.26
^C
imran@DevOps:~/keys$ ssh -i elbtestproj-ncalifornia.pem centos@52.8.24.26
The authenticity of host '52.8.24.26 (52.8.24.26)' can't be established.
RSA key fingerprint is SHA256:5UighbWQvFCVNtynq2oJgMCeL+n3ewbnG3AArnU6PaQo.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '52.8.24.26' (RSA) to the list of known hosts.
oooooooooooooooooooooooooooooooooooooooooooooooooooo
@         WARNING: UNPROTECTED PRIVATE KEY FILE!          @
oooooooooooooooooooooooooooooooooooooooooooooooooooo
Permissions 0664 for 'elbtestproj-ncalifornia.pem' are too open.
It is required that your private key files are NOT accessible by others.
This private key will be ignored.
Load key "elbtestproj-ncalifornia.pem": bad permissions
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
imran@DevOps:~/keys$ chmod 400 elbtestproj-ncalifornia.pem
imran@DevOps:~/keys$ ssh -i elbtestproj-ncalifornia.pem centos@52.8.24.26
[centos@ip-172-31-4-195 ~]$ sudo -i
[root@ip-172-31-4-195 ~]#
```

### Install apache

```
yum install httpd
```

### Start apache

```
service httpd start
```

### Enable apache

```
chkconfig httpd on
```

### Stop & Disable firewall

```
service iptables stop
```

```
chkconfig iptables off
```

### Create a test webpage for apache.

```
cd /var/www/html/
```

```
vi index.html
```

```
<html>
  <head>
    <body>
      <h1>This is a test webpage.</h1>
    </body>
  </head>
</html>
```

### Test the webpage

Enter the ec2 inst public IP in browser.

<http://52.8.24.26/>

### **AMI Creation**

Create AMI of the instance which we will use to spin web02 instance.

Web02 instance is exactly similar to web01, so instead to creating new instance from scratch and setting up apache, we can create a AMI (image) of web01 instance and can spin as many as web instances we want.

Screenshot of the AWS EC2 Management Console showing the creation of an AMI from an instance.

The left sidebar shows navigation links for EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Images, Elastic Block Store, Network & Security, Load Balancing, and Feedback.

The main area shows a list of instances. An instance named "elbtestproj-web1" is selected. A context menu is open over this instance, with the "Image" option highlighted, showing "Create Image" as the selected action.

The detailed instance view for "elbtestproj-web1" (Instance ID: i-0e240d9ab028759f1) is displayed. The instance is running, t2.micro, with an elastic IP of 52.8.24.26 and an AMI ID of CentOS Linux 6 x86\_64 HVM EBS 1602-74e73035-3435-48d6-88e0-89cc02ad83ee-ami-21e6d54b.3. The Public DNS (IPv4) is ec2-52-8-24-26.us-west-1.compute.amazonaws.com.

Below the instance details, a modal window titled "Create Image" is open. It shows the instance ID (i-0e240d9ab028759f1), image name (elbtestproj-web-ami), and image description (elbtestproj-web-ami). The "No reboot" checkbox is checked. Under "Instance Volumes", it lists a root volume: /dev/sda1 (Volume Type: General Purpose SSD (GP2), Size: 8 GiB, Throughput: 100 / 3000 MB/s, Delete on Termination: checked, Encrypted: Not Encrypted). An "Add New Volume" button is available.

The "Create Image" modal window is still open, showing the configuration for creating an AMI from the selected instance.

The "Image name" field contains "elbtestproj-web-ami".

The "Image description" field contains "elbtestproj-web-ami".

The "No reboot" checkbox is checked.

The "Instance Volumes" section shows the root volume configuration:

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/sda1	snapshot-f711c830	8	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

An "Add New Volume" button is present.

A note at the bottom states: "Total size of EBS Volumes: 8 GiB. When you create an EBS image, an EBS snapshot will also be created for each of the above volumes."

At the bottom right of the modal, there are "Cancel" and "Create Image" buttons.

The background shows the EC2 instance details for "elbtestproj-web1" (Instance ID: i-0e240d9ab028759f1, Instance State: running, Instance Type: t2.micro, Availability Zone: us-west-1a, Public DNS (IPv4): ec2-52-8-24-26.us-west-1.compute.amazonaws.com, Private IP: 172.31.4.195, Subnet ID: subnet-6e19a436).

The screenshot shows the AWS EC2 Management Console. On the left, there's a navigation sidebar with links for EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Spot Requests, Reserved Instances, Dedicated Hosts, AMIs, and more. The main area displays a table of AMIs under the heading 'Owned by me'. One row is selected, showing details for 'elbtestproj-web-ami'. The table includes columns for Name, AMI Name, AMI ID, Source, Owner, Visibility, Status, Creation Date, Platform, and Root Device. Below the table, a modal window titled 'Image: ami-11015871' shows the 'Details' tab selected, displaying the AMI ID (ami-11015871), Owner (171225278048), AMI Name (elbtestproj-web-ami), and Source (171225278048/elbtestproj-web-ami). There are tabs for 'Permissions' and 'Tags'.

### **Create web02 instance from elbtestproj-web-ami.**

Click on Launch instance --> My AMI --> Select our AMI --> Follow the wizard and create the instance similar to web01.

Tag Name: elbtestproj-web2

Security: Select existing security group --> elbtestproj-SG  
Select an exiting key pair --> <same key used for web01>  
Assign Elastic IP

### **Test the webpage**

Enter the ec2 inst public IP in browser.

<http://54.215.191.250/>

### **Load Balancer setup**

Click on Target group --> Create target Group --> Give a name --> click on Create

EC2 Manager | EC2 Manager | EC2 Manager | https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#TargetGroups:

Services Resource Groups

**Create target group**

Your load balancer routes requests to the targets in a target group using the protocol and port that you specify, and performs health checks on the targets using the health check settings that you specify.

**Target group name**: elbtestproj-web-TG

**Protocol**: HTTP

**Port**: 80

**VPC**: vpc-9610c2f2 (172.31.0.0/16) (My Default VPC)

**Health check settings**

**Protocol**: HTTP

**Path**: /

**Advanced health check settings**

**Create**

Feedback English

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Click Targets --> Edit --> Select web01 & web02 instance --> Add to registered --> Save

EC2 Manager | EC2 Manager | EC2 Manager | https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#TargetGroups:

Services Resource Groups

**Create target group**

**Filter:** Search

Name	Port	Protocol	VPC ID	Monitoring
elbtestproj-web-TG	80	HTTP	vpc-9610c2f2	

**Target group: elbtestproj-web-TG**

**Targets**

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

**Edit**

**Registered instances**

Instance ID	Name	Port	Availability Zone	Status
There are no instances registered to this target group				

**Availability Zones**

Availability Zone	Instance Count	Healthy?
There are no instances registered to this target group		

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EC2 Manager | EC2 Manager | EC2 Manager

https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#TargetGroups:

Services Resource Groups Actions

Create target group

Register and deregister instances

Registered instances

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

Remove

Instance	Name	Port	State	Security groups	Zone	Subnet ID	Subnet CIDR
i-0ad2a814386e38ab3	elbtestproj-web2	80	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20
i-0e240d9ab028759f1	elbtestproj-web1	80	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20

No instances available.

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

Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
i-0ad2a814386e38ab3	elbtestproj-web2	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20
i-0e240d9ab028759f1	elbtestproj-web1	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20

Cancel Save

SYSTEMS MANAGER SHARED RESOURCES

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https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#TargetGroups:

Services Resource Groups Actions

Create target group

Register and deregister instances

Registered instances

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

Remove

Instance	Name	Port	State	Security groups	Zone	Subnet ID	Subnet CIDR
i-0ad2a814386e38ab3	elbtestproj-web2	80	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20
i-0e240d9ab028759f1	elbtestproj-web1	80	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20

Instances

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Add to registered on port 80

Search Instances

Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
i-0ad2a814386e38ab3	elbtestproj-web2	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20
i-0e240d9ab028759f1	elbtestproj-web1	running	elbtestproj-SG	us-west-1a	subnet-6e19a436	172.31.0.0/20

Cancel Save

Feedback English

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Click on Load Balancers in Left Pane  
Create Load Balancer

Welcome to Elastic Load Balancing

Select load balancer type

Elastic Load Balancing supports two types of load balancers: Application Load Balancers (new) and Classic Load Balancers. Choose the load balancer type that meets your needs. [Learn more.](#)

Application Load Balancer       Classic Load Balancer

**Preferred for HTTP/HTTPS**

An Application Load Balancer makes routing decisions at the application layer (HTTP/HTTPS), supports path-based routing, and can route requests to one or more ports on each EC2 instance or container instance in your VPC.

**Classic Load Balancer**

A Classic Load Balancer makes routing decisions at either the transport layer (TCP/SSL) or the application layer (HTTP/HTTPS), and supports either EC2-Classic or a VPC.

[Cancel](#) [Continue](#)

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[EC2 Manager](#) [EC2 Manager](#) [EC2 Manager](#) | https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#V2CreateELBWizard:

Services Resource Groups

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	<input type="text" value="elbtestproj-web-elb"/>
Scheme	<input checked="" type="radio"/> internet-facing <input type="radio"/> internal
IP address type	<input type="text" value="ipv4"/>

### 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.

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

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EC2 Management EC2 Management EC2 Management

https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#V2CreateELBWizard:

Services Resource Groups

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

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 vpc-9610c2f2 (172.31.0.0/16) (default)

Availability Zone	Subnet ID	Subnet IPv4 CIDR	Name
us-west-1a	subnet-6e19a436	172.31.0.0/20	
us-west-1b	subnet-8c264ae8	172.31.16.0/20	

At least two subnets must be specified

Cancel Next: Configure Security Settings

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EC2 Management EC2 Management EC2 Management

https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1#V2CreateELBWizard:

Services Resource Groups

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.

Cancel Previous Next: Configure Security Groups

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**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: elbtestproj-elb-SG

Description: elbtestproj-elb-SG

Type	Protocol	Port Range	Source
Custom TCP Rule	TCP	80	Anywhere 0.0.0.0/:/0

**Add Rule**

**Cancel** **Previous** **Next: Configure Routing**

**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	elbtestproj-web-TG
Protocol	HTTP
Port	80

**Health checks**

Protocol	HTTP
Path	/

**Advanced health check settings**

**Cancel** **Previous** **Next: Register Targets**

**Step 5: Register Targets**  
Register targets with your target group. If you register an instance running in an enabled Availability Zone, the load balancer starts routing requests to the instance as soon as the registration process completes and the instance passes the initial health checks.

**Registered instances**

The following instances are registered with the target group that you selected. You can only modify this list after you create the load balancer.

Instance	Port
i-0ad2a814386e38ab3	80
i-0e240d9ab028759f1	80

**Cancel** **Previous** **Next: Review**

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**Step 6: Review**  
Please review the load balancer details before continuing

**Load balancer**

- Name: elbtestproj-web-elb
- Scheme: internet-facing
- Listeners: Port:80 - Protocol:HTTP
- IP address type: VPC
- Subnets:
- Tags:

**Security settings**

- Certificate name:
- Security policy name:

**Security groups**

- Security groups:

**Routing**

- Target group: Existing target group
- Target group name: elbtestproj-web-TG
- Port: 80
- Protocol: HTTP
- Health check protocol: Path
- Health check port:

**Cancel** **Review**

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### Validate the Load Balancer:

Enter Load Balancers DNS name in the browser to test the connection  
<http://elbtestproj-web-elb-289295805.us-west-1.elb.amazonaws.com/>

If everything is good you will see webpages from web01 and web02 instances.