

## Lab 3: Implementing Elastic Load Balancer(ELB)

The screenshot shows the AWS Management Console during the 'Create Load Balancer' wizard, specifically Step 5: Register Targets. The breadcrumb trail at the top indicates the steps: 1. Configure Load Balancer, 2. Configure Security Settings, 3. Configure Security Groups, 4. Configure Routing, 5. Register Targets, and 6. Review.

### Step 5: Register Targets

<input type="checkbox"/>	Instance	Name	Port	State	Security groups	Zone
<input type="checkbox"/>	i-00791d478b887df3f	Linux1	80	running	launch-wizard-1	ap-south-1b
<input type="checkbox"/>	i-01779e5dc2a5bec7	Linux2	80	running	launch-wizard-1	ap-south-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

Search Instances

<input type="checkbox"/>	Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input type="checkbox"/>	i-00791d478b887df3f	Linux1	running	launch-wizard-1	ap-south-1b	subnet-b10c71fd	172.31.0.0/20
<input type="checkbox"/>	i-01779e5dc2a5be...	Linux2	running	launch-wizard-1	ap-south-1b	subnet-b10c71fd	172.31.0.0/20

[Cancel](#) [Previous](#) [Next: Review](#)

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The second screenshot shows the AWS Management Console after the load balancer has been created. The breadcrumb trail is: EC2 Management Console > ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LoadBalancers:sort=loadBalancerName.

### EC2 Management Console

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type
<input type="checkbox"/>	lab3	lab3-61980892.ap-south-1.elb...	active	vpc-2f16f144	ap-south-1a, ap-south-1b	applicatio

Load balancer: **lab3**

**Description** | **Listeners** | **Monitoring** | **Integrated services** | **Tags**

#### Basic Configuration

Name	lab3
ARN	arn:aws:elasticloadbalancing:ap-south-1:156727355506:loadbalancer/app/lab3/e89689edb087afca
DNS name	lab3-61980892.ap-south-1.elb.amazonaws.com (A Record)
State	active
Type	application
Scheme	internet-facing

Instances | EC2 Management Co

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:sort=instancetype

ServicesResource Groups

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts New

Capacity Reservations

Images

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Network & Security

Security Groups New

Launch InstanceConnectActions

Filter by tags and attributes or search by keyword

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<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)
<input checked="" type="checkbox"/>	Linux1	i-00791d478b887df3f	t2.micro	ap-south-1b	running	2/2 checks ...	None	ec2-15-206-187-77.ap-south-1.compute.amazonaws.com
<input type="checkbox"/>	Linux2	i-01779e5dc2a5becc7	t2.micro	ap-south-1b	running	2/2 checks ...	None	ec2-3-7-65-130.ap-south-1.compute.amazonaws.com

Instance: i-00791d478b887df3f (Linux1)Public DNS: ec2-15-206-187-77.ap-south-1.compute.amazonaws.com

DescriptionStatus ChecksMonitoringTags

Instance ID

i-00791d478b887df3f

Public DNS (IPv4)

ec2-15-206-187-77.ap-south-1.compute.amazonaws.com

Instance state

running

IPv4 Public IP

15.206.187.77

Instance type

t2.micro

IPv6 IPs

-

Finding

Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)

Elastic IPs

-

Private DNS

ip-172-31-12-182.ap-south-1.compute.internal

Availability zone

ap-south-1b

Private IPs

172.31.12.182

Security groups

[launch-wizard-1](#), [view inbound rules](#), [view outbound rules](#)

FeedbackEnglish (US)

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Test Page for the Apache HTTP S

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Launch InstanceConnectActions

Filter by tags and attributes or search by keyword

1 to 2 of 2

<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)
<input type="checkbox"/>	Linux1	i-00791d478b887df3f	t2.micro	ap-south-1b	running	2/2 checks ...	None	ec2-15-206-187-77.ap-south-1.compute.amazonaws.com
<input checked="" type="checkbox"/>	Linux2	i-01779e5dc2a5becc7	t2.micro	ap-south-1b	running	2/2 checks ...	None	ec2-3-7-65-130.ap-south-1.compute.amazonaws.com

Instance: i-01779e5dc2a5becc7 (Linux2)Public DNS: ec2-3-7-65-130.ap-south-1.compute.amazonaws.com

DescriptionStatus ChecksMonitoringTags

Instance ID

i-01779e5dc2a5becc7

Public DNS (IPv4)

ec2-3-7-65-130.ap-south-1.compute.amazonaws.com

Instance state

running

IPv4 Public IP

3.7.65.130

Instance type

t2.micro

IPv6 IPs

-

Finding

Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)

Elastic IPs

-

Private DNS

ip-172-31-9-58.ap-south-1.compute.internal

Availability zone

ap-south-1b

Private IPs

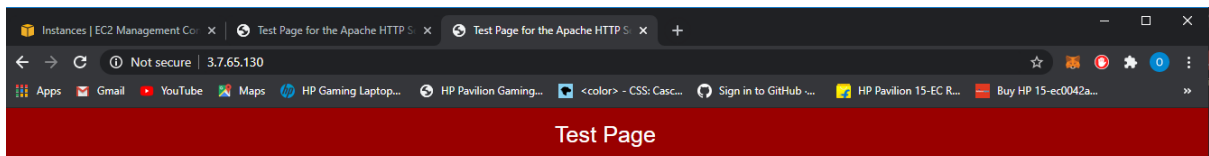
172.31.9.58

Security groups

[launch-wizard-1](#), [view inbound rules](#), [view outbound rules](#)

FeedbackEnglish (US)

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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.

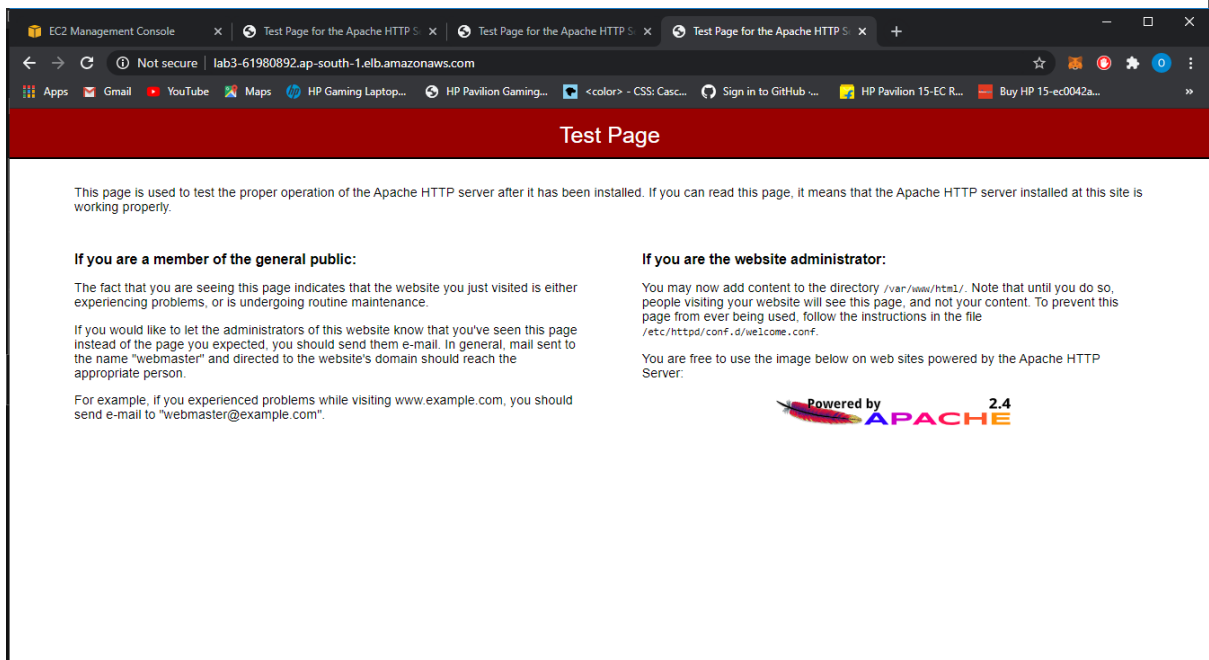
If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting [www.example.com](http://www.example.com), you should send e-mail to "webmaster@example.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.



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](http://www.example.com), you should send e-mail to "webmaster@example.com".

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



```
3.7.65.130 (ec2-user)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
home/ec2-user/
Sessions
Tools
Macros
SFTP
Remote monitoring
Follow terminal folder

3.15.206.187.77 (ec2-user) x 5.3.7.65.130 (ec2-user)
Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 8/9
Verifying : httpd-tools-2.4.43-1.amzn2.x86_64 9/9

Installed:
httpd.x86_64 0:2.4.43-1.amzn2

Dependency Installed:
apr.x86_64 0:1.6.3-5.amzn2.0.2 apr-util.x86_64 0:1.6.1-5.amzn2.0.2 apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
generic-logos-httpd.noarch 0:18.0.0-4.amzn2 httpd filesystem.noarch 0:2.4.43-1.amzn2 httpd-tools.x86_64 0:2.4.43-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2 mod_http2.x86_64 0:1.15.3-2.amzn2

Complete!
[root@ip-172-31-9-58 ec2-user]# cd/var/www/html
bash: cd/var/www/html: No such file or directory
[root@ip-172-31-9-58 ec2-user]# pwd
/home/ec2-user
[root@ip-172-31-9-58 ec2-user]# vi index.html
[root@ip-172-31-9-58 ec2-user]# more index.html
<form action="action_page.php" method="post">
<div class="imgcontainer">

</div>
<div class="container">
<label for="uname"><b>UserID</b></label>
<input type="text" placeholder="Enter Username" name="uname" required>
<label for="psw"><b>Passkey</b></label>
<input type="password" placeholder="Enter Password" name="psw" required>
<input style="submit">Login</button>
<label><input type="checkbox" checked="checked" name="remember"> Remember me </label>
</div>
<div class="container" style="background-color:#f1f1f1">
<button type="button" class="cancelbtn">Cancel</button>
<span class="psw">Forgot<a href="#">password?</a></span>
</div>
</form>
[root@ip-172-31-9-58 ec2-user]# service httpd start
Redirecting to /bin/systemctl start httpd.service
[root@ip-172-31-9-58 ec2-user]#

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15.206.187.77 (ec2-user)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
home/ec2-user/
Sessions
Tools
Macros
SFTP
Remote monitoring
Follow terminal folder

3.15.206.187.77 (ec2-user) x 5.3.7.65.130 (ec2-user)
Installed:
httpd.x86_64 0:2.4.43-1.amzn2

Dependency Installed:
apr.x86_64 0:1.6.3-5.amzn2.0.2 apr-util.x86_64 0:1.6.1-5.amzn2.0.2 apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
generic-logos-httpd.noarch 0:18.0.0-4.amzn2 httpd filesystem.noarch 0:2.4.43-1.amzn2 httpd-tools.x86_64 0:2.4.43-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2 mod_http2.x86_64 0:1.15.3-2.amzn2

Complete!
[root@ip-172-31-12-182 ec2-user]# cd/var/www/html
bash: cd/var/www/html: No such file or directory
[root@ip-172-31-12-182 ec2-user]# pwd
/home/ec2-user
[root@ip-172-31-12-182 ec2-user]# vi index.html
[root@ip-172-31-12-182 ec2-user]# more index.html
[root@ip-172-31-12-182 ec2-user]# vi index.html
[root@ip-172-31-12-182 ec2-user]# more index.html
<form action="action_page.php" method="post">
<div class="imgcontainer">

</div>
<div class="container">
<label for="uname"><b>Username</b></label>
<input type="text" placeholder="Enter Username" name="uname" required>
<label for="psw"><b>Password</b></label>
<input type="password" placeholder="Enter Password" name="psw" required>
<button style="submit">Login</button>
<label><input type="checkbox" checked="checked" name="remember"> Remember me </label>
</div>
<div class="container" style="background-color:#f1f1f1">
<button type="button" class="cancelbtn">Cancel</button>
<span class="psw">Forgot<a href="#">password?</a></span>
</div>
</form>
[root@ip-172-31-12-182 ec2-user]# service httpd start
Redirecting to /bin/systemctl start httpd.service
[root@ip-172-31-12-182 ec2-user]#

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Target groups | EC2 Management Console

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ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:ap-south-1:156727355506:targetgroup/Day3/45d15650af71ebd0

Apps | Gmail | YouTube | Maps | HP Gaming Laptop... | HP Pavilion Gaming... | <color> - CSS: Casc... | Sign in to GitHub ... | HP Pavilion 15-EC R... | Buy HP 15-ec0042a...

aws

Services | Resource Groups

Omkar Yadav | Mumbai | Support

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Security Groups New

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Placement Groups New

Key Pairs New

Network Interfaces

Load Balancing

Load Balancers

Target Groups New

Auto Scaling

Launch Configurations

Basic configuration

Target type	Protocol : Port	VPC	Load balancer
instance	HTTP : 80	vpc-2f16f144	lab3

Group details | Targets | Monitoring | Tags

Registered targets (2)

Filter resources by property or value

	Instance ID	Name	Port	Zone	Status	Status details
<input type="checkbox"/>	i-00791d478b887df3f	Linux1	80	ap-south-1b	unhealthy	Health checks failed with these co...
<input type="checkbox"/>	i-01779e5dc2a5becc7	Linux2	80	ap-south-1b	unhealthy	Health checks failed with these co...

EC2 Management Console

Test Page for the Apache HTTP S... | Test Page for the Apache HTTP S... | Test Page for the Apache HTTP S...

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LoadBalancers:sort=loadBalancerName

Apps | Gmail | YouTube | Maps | HP Gaming Laptop... | HP Pavilion Gaming... | <color> - CSS: Casc... | Sign in to GitHub ... | HP Pavilion 15-EC R... | Buy HP 15-ec0042a...

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Placement Groups New

Key Pairs New

Network Interfaces

Load Balancing

Load Balancers

Target Groups New

Auto Scaling

Launch Configurations

Create Load Balancer | Actions

Filter by tags and attributes or search by keyword

1 to 1 of 1

	Name	DNS name	State	VPC ID	Availability Zones	Type
<input checked="" type="checkbox"/>	lab3	lab3-61980892.ap-south-1.el...	active	vpc-2f16f144	ap-south-1a, ap-south-1b	applicatio

Load balancer: lab3

Description | Listeners | Monitoring | Integrated services | Tags

Basic Configuration

Name	lab3
ARN	arn:aws:elasticloadbalancing:ap-south-1:156727355506:loadbalancer/app/lab3/e89689edb087afca
DNS name	lab3-61980892.ap-south-1.elb.amazonaws.com (A Record)
State	active
Type	application
Scheme	internet-facing