

Assignment/Project Day 4 | 24th August
2020

Project 3

Step1: Create two linux instances,Use the first free linux AMI

Launch Instance

Connect

Actions

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)	IPv4 Public IP	IPv6 IPs	Key Pair
<input checked="" type="checkbox"/>	Linux1	i-09cac3a2398683e4b	t2.micro	us-east-1d	running	2/2 checks ...	None	ec2-35-175-245-52.co...	35.175.245.52	-	windo
<input type="checkbox"/>	Linux2	i-0ec9de4b56e30d0bb	t2.micro	us-east-1d	running	2/2 checks ...	None	ec2-34-201-110-231.co...	34.201.110.231	-	windo

Instance: **i-09cac3a2398683e4b (Linux1)** Public DNS: **ec2-35-175-245-52.compute-1.amazonaws.com**

Description

Status Checks

Monitoring

Tags

Instance ID

Instance state

Instance type

Finding

Private DNS

Public DNS (IPv4)

IPv4 Public IP

IPv6 IPs

Elastic IPs

Availability zone

i-09cac3a2398683e4b

running

t2.micro

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

ip-172-31-84-168.ec2.internal

ec2-35-175-245-52.compute-1.amazonaws.com

35.175.245.52

-

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us-east-1d

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Launch Instance

Connect

Actions

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)	IPv4 Public IP	IPv6 IPs	Key Pair
<input type="checkbox"/>	Linux1	i-09cac3a2398683e4b	t2.micro	us-east-1d	running	2/2 checks ...	None	ec2-35-175-245-52.co...	35.175.245.52	-	windo
<input checked="" type="checkbox"/>	Linux2	i-0ec9de4b56e30d0bb	t2.micro	us-east-1d	running	2/2 checks ...	None	ec2-34-201-110-231.co...	34.201.110.231	-	windo

Instance: **i-0ec9de4b56e30d0bb (Linux2)** Public DNS: **ec2-34-201-110-231.compute-1.amazonaws.com**

Description

Status Checks

Monitoring

Tags

Instance ID

Instance state

Instance type

Finding

Private DNS

Public DNS (IPv4)

IPv4 Public IP

IPv6 IPs

Elastic IPs

Availability zone

i-0ec9de4b56e30d0bb

running

t2.micro

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

ip-172-31-81-17.ec2.internal

ec2-34-201-110-231.compute-1.amazonaws.com

34.201.110.231

-

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us-east-1d

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Step2: Launch both instances using Terminal

```
Downloads — ec2-user@ip-172-31-84-168:~ — ssh -i windows.pem ec2-user@...
Documents
Downloads
Music
Pictures
WKMIN7666674:~ neeshett$ cd Downloads/
WKMIN7666674:Downloads neeshett$ chmod 400 windows.pem
WKMIN7666674:Downloads neeshett$ cd ..
WKMIN7666674:~ neeshett$ ssh -i "windows.pem" ec2-user@ec2-35-175-245-52.compute-1.amazonaws.com
Warning: Identity file windows.pem not accessible: No such file or directory.
ec2-user@ec2-35-175-245-52.compute-1.amazonaws.com: Permission denied (publickey,gsapi-keyex,gsapi-with-mic)
WKMIN7666674:~ neeshett$ cd Downloads/
WKMIN7666674:Downloads neeshett$ ssh -i "windows.pem" ec2-user@ec2-35-175-245-52.compute-1.amazonaws.com

--|  _--|  )
_| (  _/   /   Amazon Linux 2 AMI
--| \_--|  _--|

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
[ec2-user@ip-172-31-84-168 ~]$ yum install httpd

Downloads — ec2-user@ip-172-31-81-17:~ — ssh -i windows.pem ec2-user@...
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208958.
WKMIN7666674:~ neeshett$ cd Downloads/
WKMIN7666674:Downloads neeshett$ ssh -i "windows.pem" ec2-user@ec2-34-201-110-231.compute-1.amazonaws.com
The authenticity of host 'ec2-34-201-110-231.compute-1.amazonaws.com (34.201.110.231)' can't be established.
ECDSA key fingerprint is SHA256:h2W1D90kXEqBVomqzzT89PPDFU8XMsuh4aUp12FP7Q.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-34-201-110-231.compute-1.amazonaws.com,34.201.110.231' (ECDSA) to the list of known hosts.

--|  _--|  )
_| (  _/   /   Amazon Linux 2 AMI
--| \_--|  _--|

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
[ec2-user@ip-172-31-81-17 ~]$
```

Step4: Host html login webpage on both servers

```
Downloads — root@ip-172-31-84-168:/var/www/html — ssh -i windows.pem ec2-user@ec2-35-175-245-52.compute-1.amazon...
apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
httpdfilesystem.noarch 0:2.4.43-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2
generic-logos-httpd.noarch 0:18.0.0-4.amzn2
httpd-tools.x86_64 0:2.4.43-1.amzn2
mod_http2.x86_64 0:1.15.3-2.amzn2

Complete!
[root@ip-172-31-84-168 ec2-user]# cd /var/www/html
[root@ip-172-31-84-168 html]# pwd
/var/www/html
[root@ip-172-31-84-168 html]# vi index.html
[root@ip-172-31-84-168 html]# 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 type="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-172-31-84-168 html]# service httpd start
Redirecting to /bin/systemctl start httpd.service
[root@ip-172-31-84-168 html]#
```

```

Downloads — root@ip-172-31-81-17:/var/www/html — ssh -i windows.pem ec2-user@ec2-34-201-110-231.compute...
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-172-31-81-17 ec2-user]# cd /var/www/html
[root@ip-172-31-81-17 html]# pwd
/var/www/html
[root@ip-172-31-81-17 html]# vi index.html
[root@ip-172-31-81-17 html]# 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>
<button type="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-172-31-81-17 html]# service httpd start
Redirecting to /bin/systemctl start httpd.service

```

Step5: Check if the application is deployed on both servers by copy pasting the public ip of the servers into the browser.

Linux1 :

Launch Instance

Connect

Actions

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)	IPv4 Public IP	IPv6 IPs	Key Pair
<input checked="" type="checkbox"/>	Linux1	i-09cac3a2398683e4b	t2.micro	us-east-1d	running	2/2 checks ...	None	ec2-35-175-245-52.co...	35.175.245.52	-	windo
<input type="checkbox"/>	Linux2	i-0ec9de4b56e30d0bb	t2.micro	us-east-1d	running	2/2 checks ...	None	ec2-34-201-110-231.co...	34.201.110.231	-	windo

Instance: i-09cac3a2398683e4b (Linux1) Public DNS: ec2-35-175-245-52.compute-1.amazonaws.com

Description

Status Checks

Monitoring

Tags

Instance ID

i-09cac3a2398683e4b

Instance state

running

Instance type

t2.micro

Finding

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Private DNS

ip-172-31-84-168.ec2.internal

Public DNS (IPv4)

ec2-35-175-245-52.compute-1.amazonaws.com

IPv4 Public IP

35.175.245.52

IPv6 IPs

-

Elastic IPs

Availability zone

us-east-1d

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Avatar

Username

Enter Username

Password

Enter Password

Login

☒ Remember me

Cancel

Forgot password?

Linux2 :

Launch Instance

Connect

Actions


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)	IPv4 Public IP	IPv6 IPs	Key Pa
<input type="checkbox"/>	Linux1	i-09cac3a2398683e4b	t2.micro	us-east-1d	<div>●</div> running	<div>✓</div> 2/2 checks ...	None	<div>🚩</div> ec2-35-175-245-52.co...	35.175.245.52	-	windo
<input checked="" type="checkbox"/>	Linux2	i-0ec9de4b56e30d0bb	t2.micro	us-east-1d	<div>●</div> running	<div>✓</div> 2/2 checks ...	None	<div>🚩</div> ec2-34-201-110-231.co...	34.201.110.231	-	windo

Instance: i-0ec9de4b56e30d0bb (Linux2)		Public DNS: ec2-34-201-110-231.compute-1.amazonaws.com			
Description	Status Checks	Monitoring	Tags		
Instance ID	i-0ec9de4b56e30d0bb		Public DNS (IPv4)	ec2-34-201-110-231.compute-1.amazonaws.com	
Instance state	running		IPv4 Public IP	34.201.110.231	
Instance type	t2.micro		IPv6 IPs	-	
Finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more		Elastic IPs		
Private DNS	ip-172-31-81-17.ec2.internal		Availability zone	us-east-1d	

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 **UserID** **Passkey** ☒ Remember me

[Forgot password?](#)

Step6: Create a application Load balancer with the above two instances as targets

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

Services Resource Groups

New EC2 Experience

EC2 Dashboard

Events

Tags

Limits

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Create Load Balancer

Actions

Filter by tags and attributes or search by keyword

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At
LetsUpgradeELB	LetsUpgradeELB-30169820...	active	vpc-f103f18c	us-east-1a, us-east-1b	application	August 24, 2020 at 3:49:38 ...
LetsUpgradeNewElb	LetsUpgradeNewElb-13626...	active	vpc-f103f18c	us-east-1a, us-east-1f, ...	application	August 24, 2020 at 8:21:40 ...
newELB2	newELB2-982331137.us-eas...	active	vpc-f103f18c	us-east-1a, us-east-1b	application	August 24, 2020 at 5:30:19 ...

Description Listeners Monitoring Integrated services Tags

Basic Configuration

Name LetsUpgradeNewElb

ARN arn:aws:elasticloadbalancing:us-east-1:228662620179:loadbalancer/app/LetsUpgradeNewElb/3315baa0b3e9441a

DNS name LetsUpgradeNewElb-1362683731.us-east-1.elb.amazonaws.com (A Record)

console.aws.amazon.com/ec2/v2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:228662620179:targetgroup/TargetGroupfor2LinuxInstance/4d4c1edb636921a3

Services Resource Groups

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Load Balancing

Load Balancers

Target Groups

Auto Scaling

Launch Configurations

Auto Scaling Groups

EC2 > Target groups > TargetGroupfor2LinuxInstance

TargetGroupfor2LinuxInstance

Delete

arn:aws:elasticloadbalancing:us-east-1:228662620179:targetgroup/TargetGroupfor2LinuxInstance/4d4c1edb636921a3

Basic configuration

Target type instance	Protocol : Port HTTP : 80	VPC vpc-f103f18c	Load balancer LetsUpgradeNewElb
-------------------------	------------------------------	---------------------	------------------------------------

Group details Targets Monitoring Tags

Registered targets (2)

Filter resources by property or value

Instance ID	Name	Port	Zone	Status	Status details
i-09cac3a2398683e4b	Linux1	80	us-east-1d	healthy	
i-0ec9de4b56e30d0bb	Linux2	80	us-east-1d	healthy	

Step7:Check the functioning of ELB

← → ↺

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

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EC2 Dashboard New

Events New

Tags

Limits

▼ Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

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Capacity Reservations

▼ Images

AMIs

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups New

Elastic IPs New

Placement Groups New

Key Pairs New

Network Interfaces

Create Load Balancer

Actions ▾

Filter by tags and attributes or search by keyword

< 1 to 3 of 3 >

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At
<input type="checkbox"/> LetsUpgradeELB	LetsUpgradeELB-30169820....	active	vpc-f103f18c	us-east-1a, us-east-1b	application	August 24, 2020 at 3:49:38 ...
<input checked="" type="checkbox"/> LetsUpgradeNewElb	LetsUpgradeNewElb-13626...	active	vpc-f103f18c	us-east-1a, us-east-1f, ...	application	August 24, 2020 at 8:21:40 ...
<input type="checkbox"/> newELB2	newELB2-982331137.us-eas...	active	vpc-f103f18c	us-east-1a, us-east-1b	application	August 24, 2020 at 5:30:19 ...

Description

Listeners

Monitoring

Integrated services

Tags

Basic Configuration

Name

LetsUpgradeNewElb

ARN

arn:aws:elasticloadbalancing:us-east-1:228662620179:loadbalancer/app/LetsUpgradeNewElb/3315baa0b3e9441a

DNS name

LetsUpgradeNewElb-1362683731.us-east-1.elb.amazonaws.com

(A Record)

← → ↺

console.aws.amazon.com/ec2/v2/home?region=us-east-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:us-east-1:228662620179:targetgroup/TargetGroupfor2LinuxInstance/4d4c1edb636921a3

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Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts New

Scheduled Instances

Capacity Reservations

▼ Images

AMIs

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups New

Elastic IPs New

Placement Groups New

Key Pairs New

Network Interfaces

▼ Load Balancing

Load Balancers

Target Groups New

▼ Auto Scaling

Launch Configurations

Auto Scaling Groups

EC2 > Target groups > TargetGroupfor2LinuxInstance

TargetGroupfor2LinuxInstance

Delete

arn:aws:elasticloadbalancing:us-east-1:228662620179:targetgroup/TargetGroupfor2LinuxInstance/4d4c1edb636921a3

Basic configuration

Target type

instance

Protocol : Port

HTTP : 80

VPC

vpc-f103f18c

Load balancer

LetsUpgradeNewElb

Group details

Targets

Monitoring

Tags

Registered targets (2)

🔄

Deregister

Register targets

Filter resources by property or value

< 1 >

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Status	Status details
<input type="checkbox"/>	i-09cac3a2398683e4b	Linux1	80	us-east-1d	🟢 healthy	
<input type="checkbox"/>	i-0ec9de4b56e30d0bb	Linux2	80	us-east-1d	🟢 healthy	

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Avatar

Username

Enter Username

Passkey

Enter Password

Login

Remember me

☒

Cancel

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Avatar

UserID

Enter Username

Passkey

Enter Password

Login

Remember me

☒

Cancel

Forgot password?