

What is Route53?

- Route 53 is a domain management service (DNS hosting solution) provided by AWS
- Route53 is commonly used with an ELB to direct traffic from the domain to the instances (and thus have traffic evenly distributed among servers running your applications.

- ▶ DNS service converts human friendly domain names to corresponding IP address.
- ▶ Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service. It is designed to give developers and businesses an extremely reliable and cost effective way to route end users to Internet applications by translating names like "www.example.com" into the numeric IP addresses like "192.0.2.1" that computers use to connect to each other. Amazon Route 53 is fully compliant with IPv6 as well.

- ▶ <http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/route-53-concepts.html>

- ▶ **DNS:** The domain name system, more commonly known as "DNS" is the networking system in place that allows us to resolve human-friendly names to unique addresses.
- ▶ **Domain name:** A domain name is the human-friendly name that we are used to associating with an internet resource. For instance, "google.com" is a domain name. Some people will say that the "google" portion is the domain, but we can generally refer to the combined form as the domain name.

- ▶ **Domain Registrar:** Getting a domain name involves registering the name you want with an organization called ICANN through a domain name registrar. For example, if you choose a name like "example.com", you will have to go to a registrar, pay a registration fee that costs around US\$10 to US\$35 for that name.
- ▶ **IP Address:** An IP address is what we call a network addressable location. Each IP address must be unique within its network. When we are talking about websites, this network is the entire internet.
- ▶ **Top-Level Domain:** A top-level domain, or TLD, is the most general part of the domain. The top-level domain is the furthest portion to the right (as separated by a dot). Common top-level domains are "com", "net", "org", "gov", "edu", and "io".

- ▶ **Hosts:** Within a domain, the domain owner can define individual hosts, which refer to separate computers or services accessible through a domain. For instance, most domain owners make their web servers accessible through the bare domain (example.com) and also through the "host" definition "www" (www.example.com).
- ▶ **Name Server:** A name server is a computer designated to translate domain names into IP addresses. These servers do most of the work in the DNS system. Since the total number of domain translations is too much for any one server, each server may redirect request to other name servers or delegate responsibility for a subset of subdomains they are responsible for.

- ▶ **Zone File:** A zone file is a simple text file that contains the mappings between domain names and IP addresses. This is how the DNS system finally finds out which IP address should be contacted when a user requests a certain domain name.
- ▶ **Records:** Within a zone file, records are kept. In its simplest form, a record is basically a single mapping between a resource and a name. These can map a domain name to an IP address, define the name servers for the domain, define the mail servers for the domain, etc.

- ▶ **SOA Records:** The Start of Authority, or SOA, record is a mandatory record in all zone files. It must be the first real record in a file (although \$ORIGIN or \$TTL specifications may appear above). It is also one of the most complex to understand.
- ▶ **A and AAAA Records:** Both of these records map a host to an IP address. The "A" record is used to map a host to an IPv4 IP address, while "AAAA" records are used to map a host to an IPv6 address.
- ▶ **CNAME Records:** CNAME records define an alias for canonical name for your server (one defined by an A or AAAA record).

- ▶ **MX Records:** MX records are used to define the mail exchanges that are used for the domain. This helps email messages arrive at your mail server correctly.
- ▶ **NS Records:** This record type defines the name servers that are used for this zone.
- ▶ Hosted Zone, Alias Records,
- ▶ **Zone apex record:** An apex record is one at the root of a DNS zone. Sometimes called "naked domains".

Route 53 Main functions

Key features of Route53

- 1) Domain Registration
- 2) DNS service
- 3) Health Checking

- ▶ **Register domain names** – Your website needs a name, such as example.com. Amazon Route 53 lets you register a name for your website or web application, known as a *domain name*. For an overview, see [Registering Domain Names](#).
- ▶ **Route Internet traffic to the resources for your domain** – When a user opens a web browser and enters your domain name in the address bar, Amazon Route 53 helps the Domain Name System (DNS) connect the browser with your website or web application. For an overview, see [Routing Internet Traffic to Your Website or Web Application](#).
- ▶ **Check the health of your resources** – Amazon Route 53 sends automated requests over the Internet to a resource, such as a web server, to verify that it's reachable, available, and functional. You also can choose to receive notifications when a resource becomes unavailable and choose to route Internet traffic away from unhealthy resources. For an overview, see [How Amazon Route 53 Checks the Health of Your Resources](#).

Mandatory Requirements

- ▶ Registered Domain name
- ▶ Instances/Resources to host your service/Application
- ▶ DNS service equipped with routing policy/protocol to suite your needs.

Types of Routing Policy

1. Simple
2. Weighted
3. Latency-Based
4. Failover
5. Geo location

<http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-policy.html>

Simple

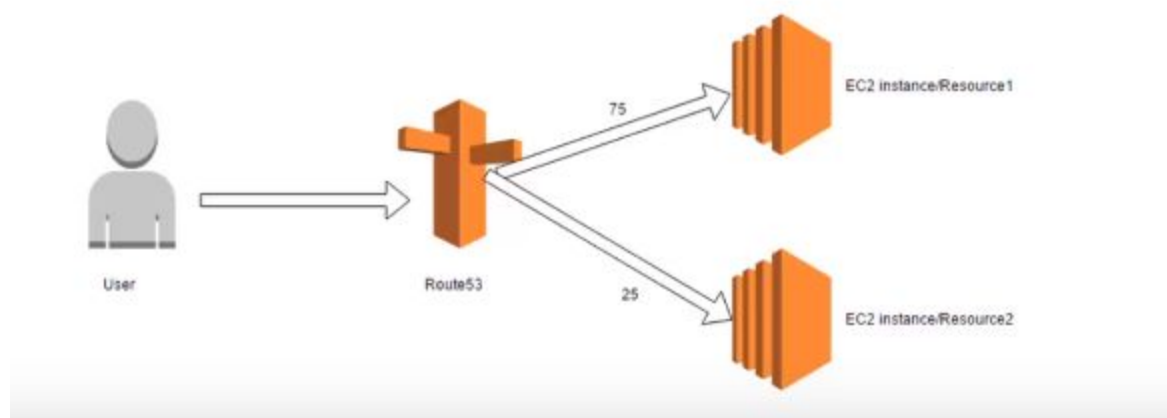
Route all traffic to one end point



Weighted:

Route traffic to multiple endpoints (manual Load balancing)

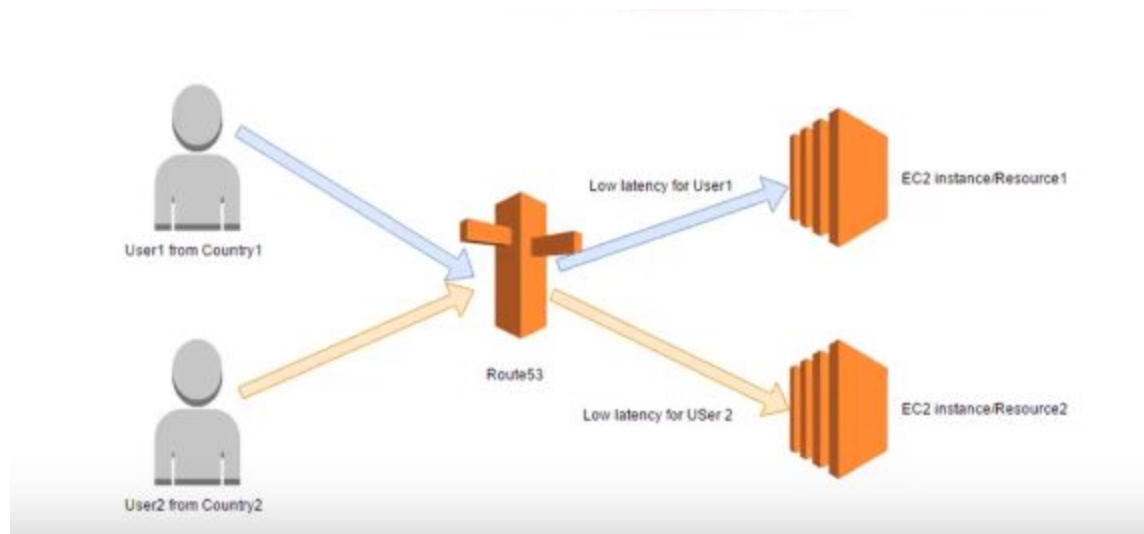
- Use the weighted routing policy when you have multiple resources that perform the same function (for example, web servers that serve the same website) and you want Amazon Route 53 to route traffic to those resources in proportions that you specify (for example, one quarter to one server and three quarters to the other). For more information about weighted resource record sets.



Latency Routing

Route traffic to an endpoint based on the users latency to various endpoints.

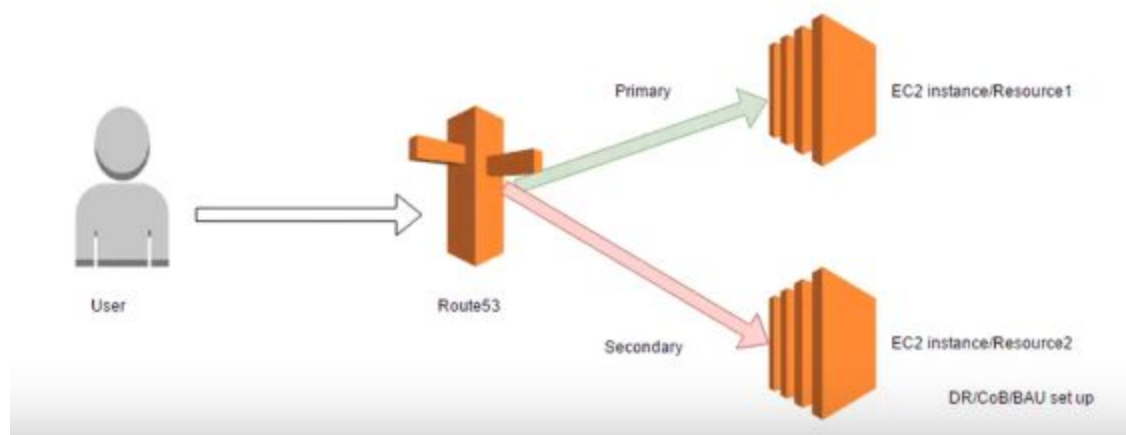
- Use the latency routing policy when you have resources in multiple Amazon EC2 data centers that perform the same function and you want Amazon Route 53 to respond to DNS queries with the resources that provide the best latency. For example, you might have web servers for example.com in the Amazon EC2 data centers in Ireland and in Tokyo. When a user browses to example.com, Amazon Route 53 chooses to respond to the DNS query based on which data center gives your user the lowest latency. For more information about latency resource record sets.



Failover routing

Route traffic to a “secondary” endpoint if the “primary” endpoint is unavailable

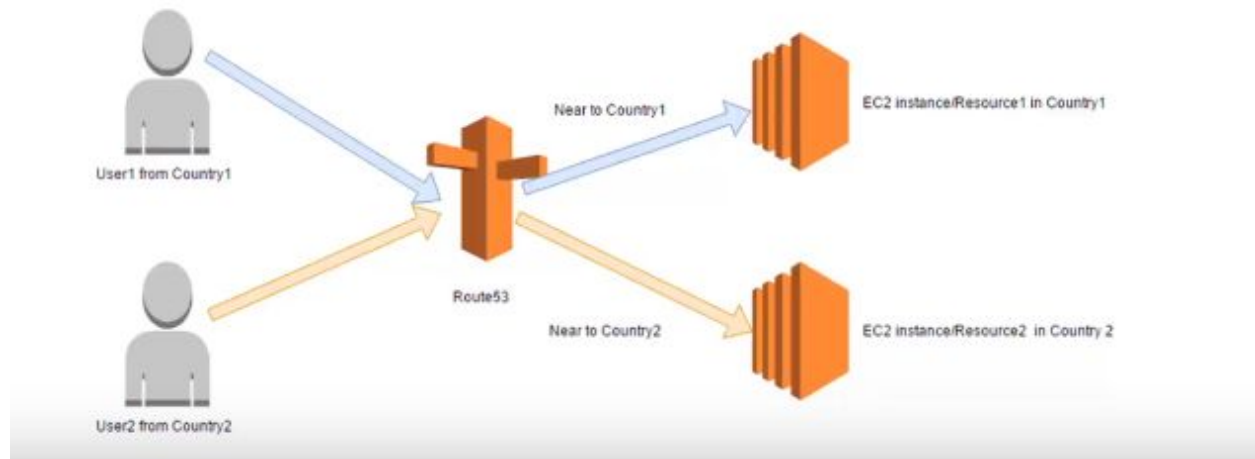
- Use the failover routing policy when you want to configure active-passive failover, in which one resource takes all traffic when it's available and the other resource takes all traffic when the first resource isn't available. For more information about failover resource record sets, see [Configuring Active-Passive Failover by Using Amazon Route 53 Failover and Failover Alias Resource Record Sets](#). For information about creating failover resource record sets in a private hosted zone.



Geo-Location Routing

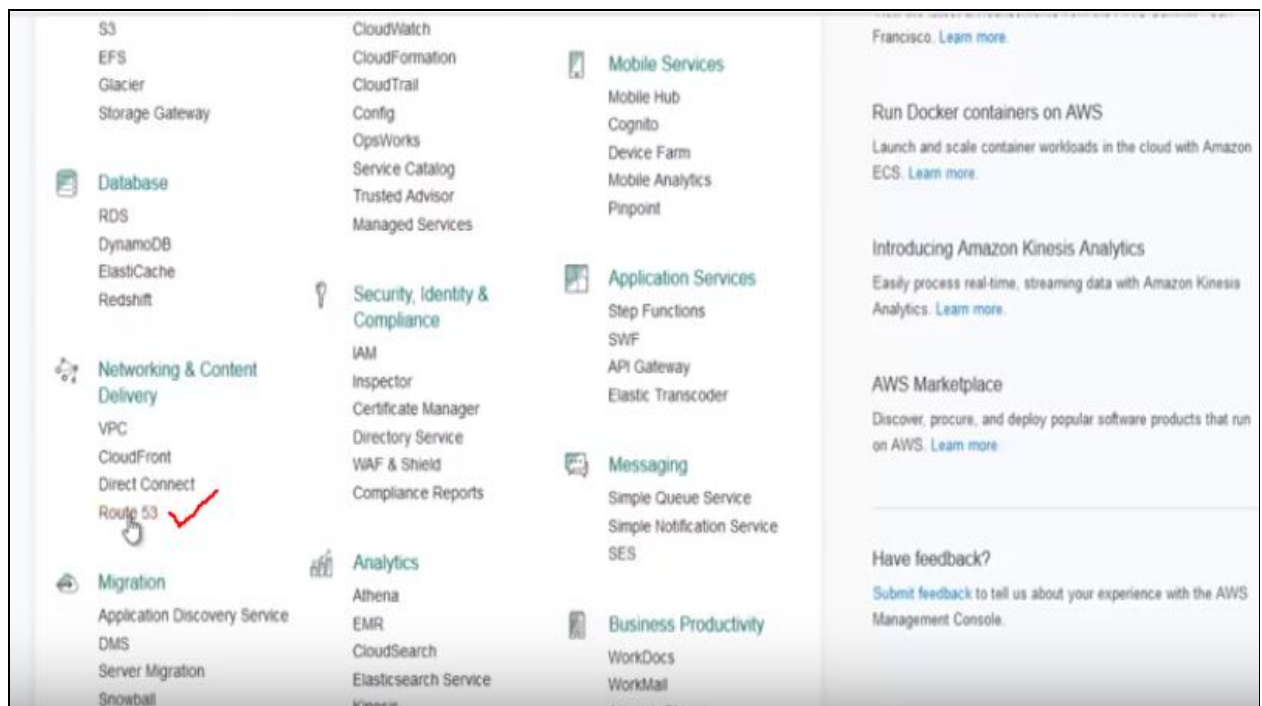
Route traffic to an endpoint based on the geographical location of the user

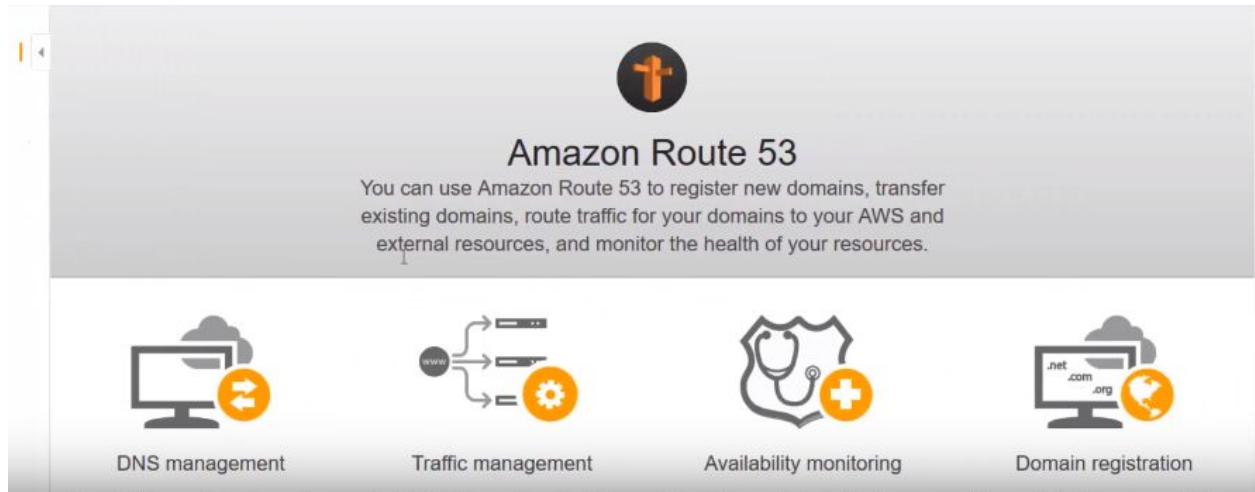
- Use the geolocation routing policy when you want Amazon Route 53 to respond to DNS queries based on the location of your users. For more information about geolocation resource record sets.



LAB:

First login to AWS Management Console and Click on ROute 53 in Network and Delivery Section

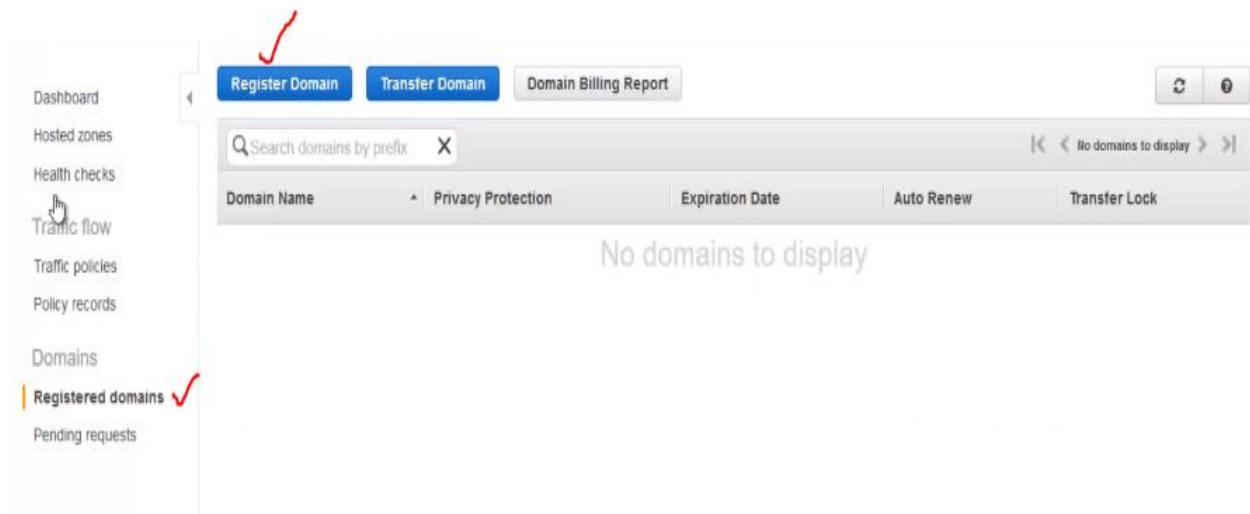




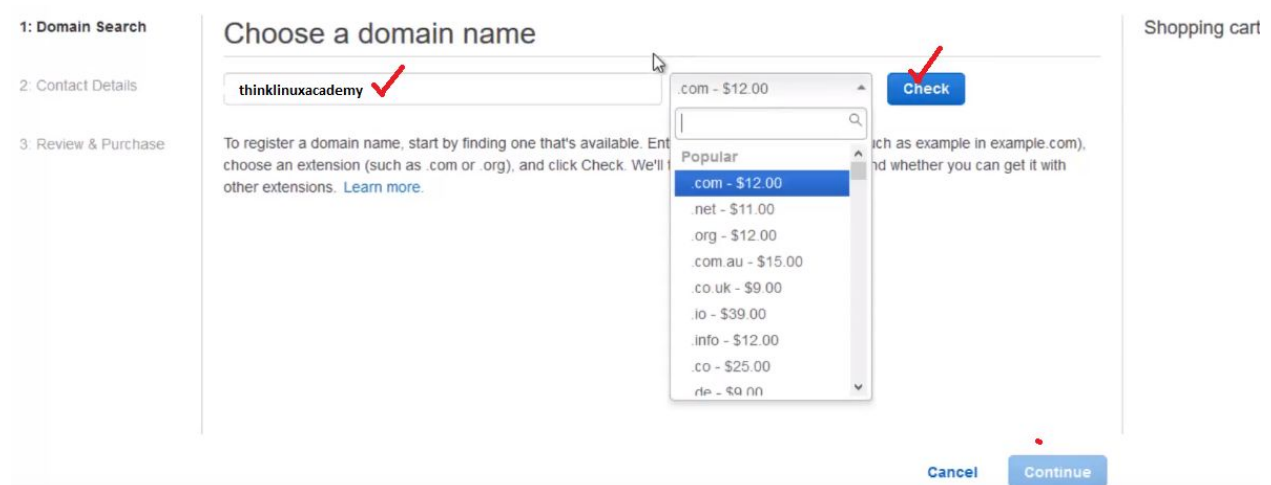
First Time if we are using then we will see this screen, So click as below



TASK1: Register your Domain with AWS Registrar



Check your domain is available in registrar or not



If available, you can register



Enter your contact Details

2: Contact Details

3: Review & Purchase

Enter the details for your Registrant, Administrative and Technical contacts below. All fields are required unless specified otherwise. [Learn more.](#)

My Registrant, Administrative and Technical Contacts are all the same: ☒ Yes ☐ No

Registrant Contact

Contact Type ⓘ	<input type="text" value="Person"/>
First Name	<input type="text"/>
Last Name	<input type="text"/>
Organization ⓘ	<input type="text" value="Not applicable"/>
Email	<input type="text"/>
Phone	<input type="text" value="+ 1"/> <input type="text" value="3115550188"/>
<small>Enter country calling code and phone number</small>	
Address 1	<input type="text"/>
<small>Street address, P.O. box</small>	

Click on Continue

Managing DNS for Your New Domain

To make it easier for you to use Route 53 as the DNS service for your new domain, we'll automatically create a hosted zone. That's where you store information about how to route traffic for your domain, for example, to an Amazon EC2 instance. If you won't use your domain right now, you can delete the hosted zone. If you will use your domain, Route 53 charges for the hosted zone and for the DNS queries that we receive for your domain. For more information, see [Amazon Route 53 Pricing](#).

Terms and Conditions

Amazon Route 53 enables you to register and transfer domain names using your AWS account. However, AWS is not a domain name registrar, so we use registrar associates to perform registration and transfer services. When you purchase domain names through AWS, you are registering your domain with one of our registrar associates. The registrar for your domain will periodically contact the registrant contact that you specified to verify the contact details and renew registration.

☒ I have read and agree to the [AWS Domain Name Registration Agreement](#)

Cancel

Back

Complete Purchase

Agree to terms and condition and click on Complete Purchase

Dashboard
Hosted zones
Health checks
Traffic flow
Traffic policies
Policy records
Domains
Registered domains
Pending requests

Thank you for registering your domain to Route 53

Your registration request for the following 1 domain had been successfully submitted:

- thinklinuxacademy.com

Registering a new domain: what's next?

- If your email address needs to be verified, one of our registrar associates will send an email to the registrant contact when domain registration is approved, as required by ICANN. The email will come either from noreply@domainnameverification.net or noreply@registrar.amazon.com.

Important

If you don't click the link in the email within 15 days to verify that you provided a valid email address, the registrar will suspend your domain. A suspended domain is not available on the Internet.

Note the following:

- Domain registration might take up to **three days** to complete.
- We'll send email to the registrant contact when the domain is successfully registered.
- We'll also send email to the registrant contact if we aren't able to register the domain for some reason.
- You can view the current status of your request on the dashboard in the Route 53 console.

[Go To Domains](#)

Completed but you have to wait

Go to Payments Section and pay the money

Dashboard
Hosted zones
Health checks
Traffic flow
Traffic policies
Policy records
Domains
Registered domains
Pending requests

Status of new domain registrations and domain transfers

Domains that we're registering or transferring for you are listed below. When the registration or transfer is complete, the

Domain Name	Status
thinklinuxacademy.com	Domain registration in progress: To finish registering your domain, you must verify your payment.

April 26, 2017 10:01 UTC+5:30

My Account
My Organization
My Billing Dashboard
My Security Credentials
Sign Out

Cost Explorer
Budgets
Reports
Cost Allocation Tags
Payment Methods
Payment History
Consolidated Billing
Preferences
Credits
Tax Settings

Payment History

Welcome to the AWS Account Billing console. Your last month, month-to-date, and month-end forecasted costs appear below.

Current month-to-date balance for April 2017, the exchange rate for the Payment Currency is estimated.

8.05 USD, which converts to

522.59 INR

at today's exchange rate of 64.91775

Month	Cost
Current month-to-date	\$8.05
Month-end forecasted	\$8.05

Month-to-date spending by service

The chart below shows the proportion of costs spent for each service you use.

Service	Cost
Registrar	\$7.00
S3	\$0.00
DataTransfer	\$0.00
EC2	\$0.00
Tax	\$1.05
Total	\$8.05

Go to Payment Method

Dashboard

Bills

Cost Explorer

Budgets

Reports

Cost Allocation Tags

Payment Methods

Payment History

Consolidated Billing

Preferences

Credits

Tax Settings

Payment Methods

?

Make Payment

Credit card	Name on card	Expires on

Click on Make Payment

Dashboard

Bills

Cost Explorer

Budgets

Reports

Cost Allocation Tags

Payment Methods

Payment History

Consolidated Billing

Preferences

Credits

Tax Settings

Payments Due

?

Payment Due

You have 1 unpaid charge(s) due. These charges will become overdue if they are not settled before their corresponding due dates.

Amount Past Due:

0.00 USD*

Amount Due:

8.05 USD*

Total:

8.05 USD*

* Totals shown in USD. For local currency, please view the invoices below.

See Payment History

Invoice Date	Invoice ID	Type	Due Date	Status	Amount	Actions
2017-04-26	97371288	Charge	2017-04-26	Unpaid	522.59 INR	Pay Now

Pay Now

Dashboard

Bills

Cost Explorer

Budgets

Reports

Cost Allocation Tags

Payment Methods

Payment History

Consolidated Billing

Preferences

Credits

Tax Settings

Payment Methods

Make Payment

Add a card

Verify you Email address also

Email address verification process

✓ Your contact is now validated.

Verify now in Register Domain section

Dashboard
Hosted zones
Health checks
Traffic flow
Traffic policies
Policy records
Domains
Registered domains
Pending requests

Register Domain Transfer Domain Domain Billing Report

Search domains by prefix X

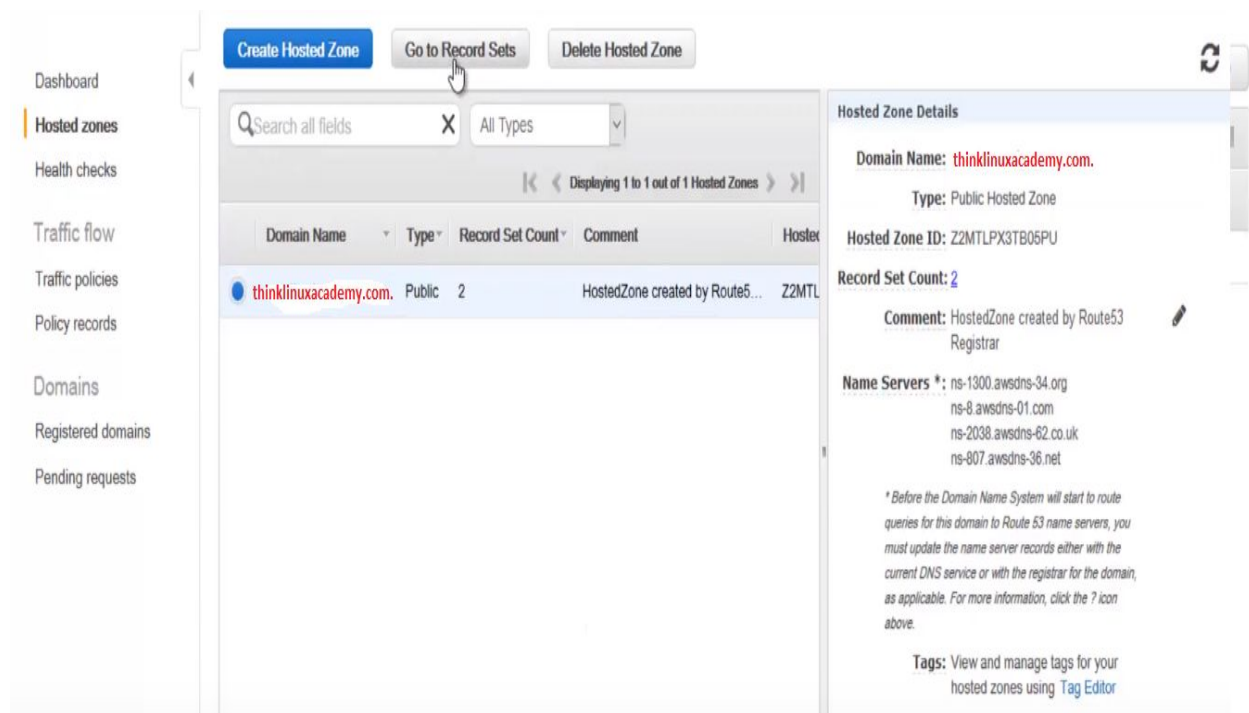
Displaying 1 to 1 out of 1 domains

Domain Name	Privacy Protection	Expiration Date	Auto Renew	Transfer Lock
thinklinuxacademy.com	No contacts	April 26, 2018	✓	✓

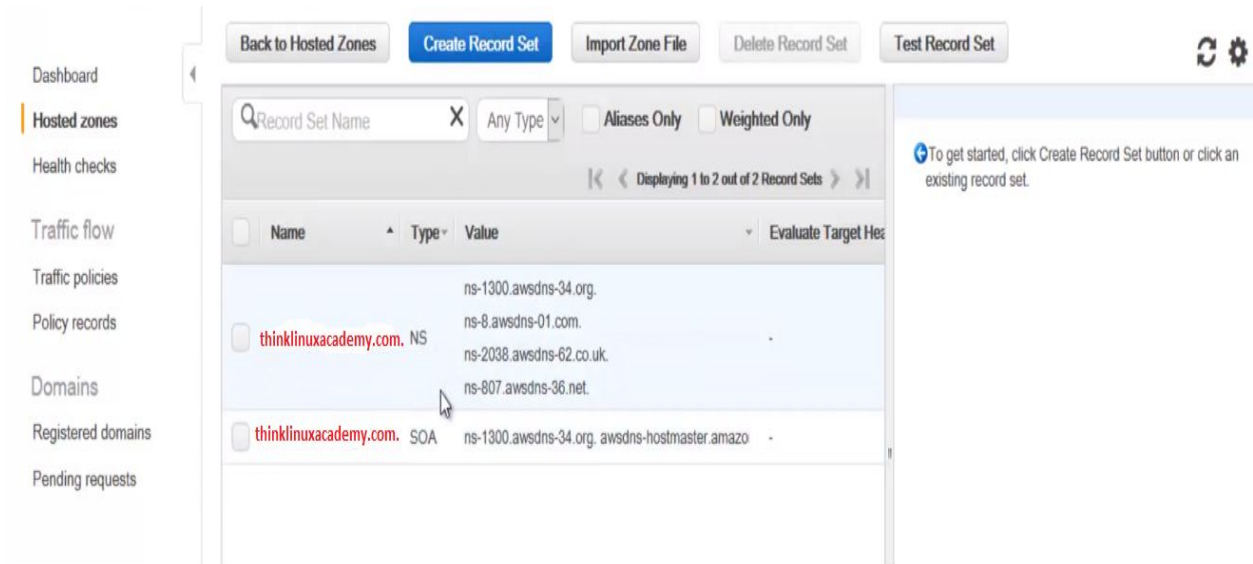
HOSTED ZONE:

- A Hosted Zones stores DNS records for your domain
- Basically, it contains all the rules (record sets) that tells Route 53 what to do with DNS request.
- There are both public and private hosted zones
 - A Public Hosted Zone is a container that holds information about how you want to route traffic on the internet for a domain, such as thinklinuxacadmey.com, and its subdomains.

- A Private Hosted Zone is a container that holds information about how you want to route traffic for a domain and its subdomains within one or more Amazon Virtual Private Clouds.
- After you create a Hosted Zone for your domain like thinklinuxacademy.com, you create resource record sets to tell the Domain Name System (DNS) how you want traffic to be routed for that domain
- By default, Hosted zone will be pre-populated with NS (name server) and SOA (start of authority) record sets.



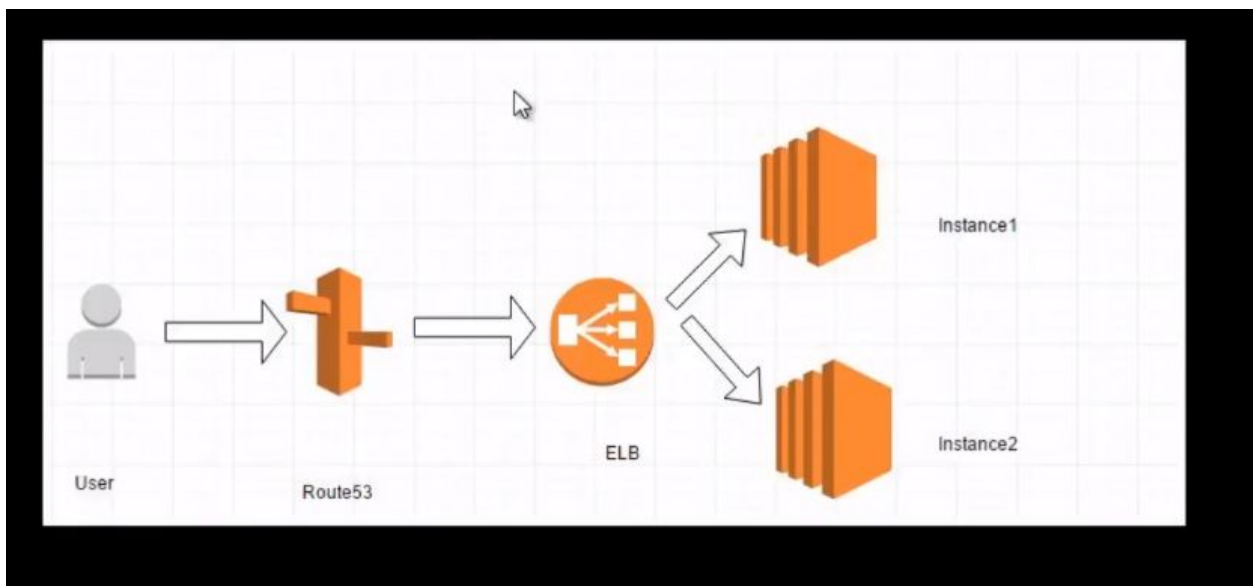
Click on Go to Record Sets



There were 2 record set already available

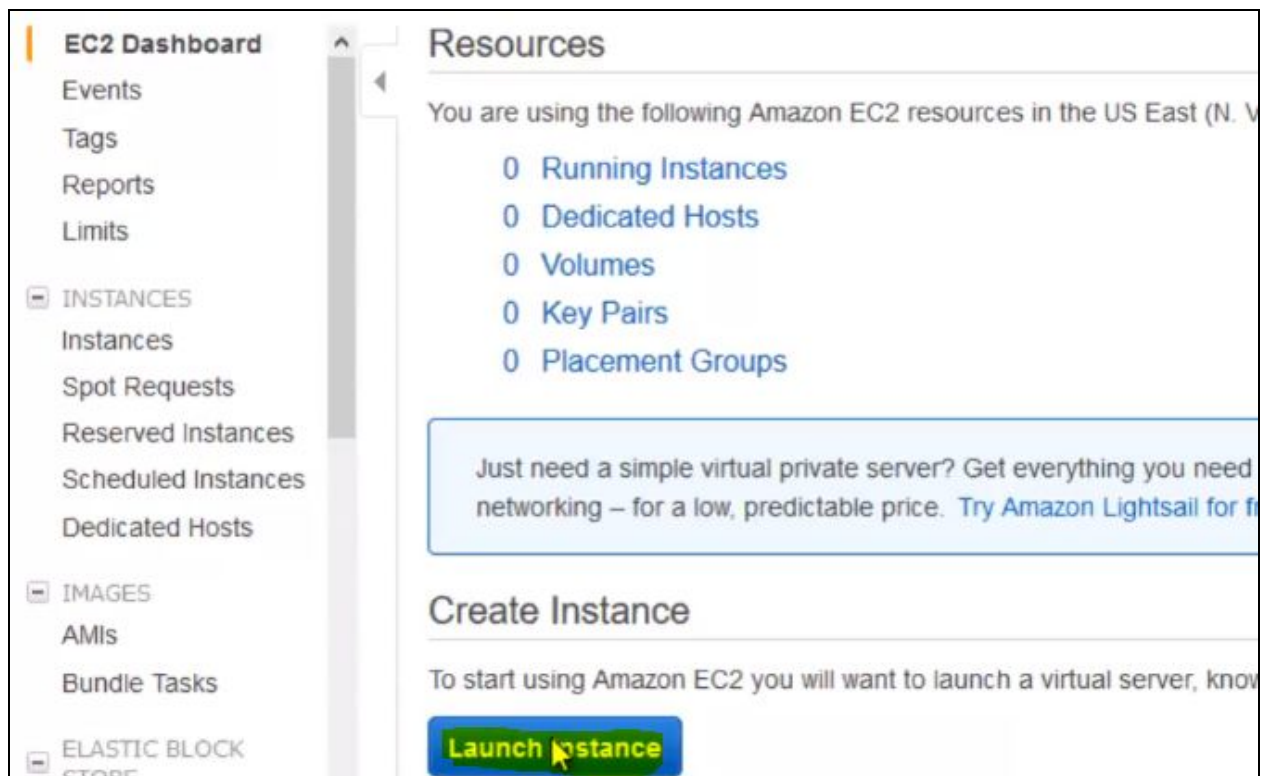
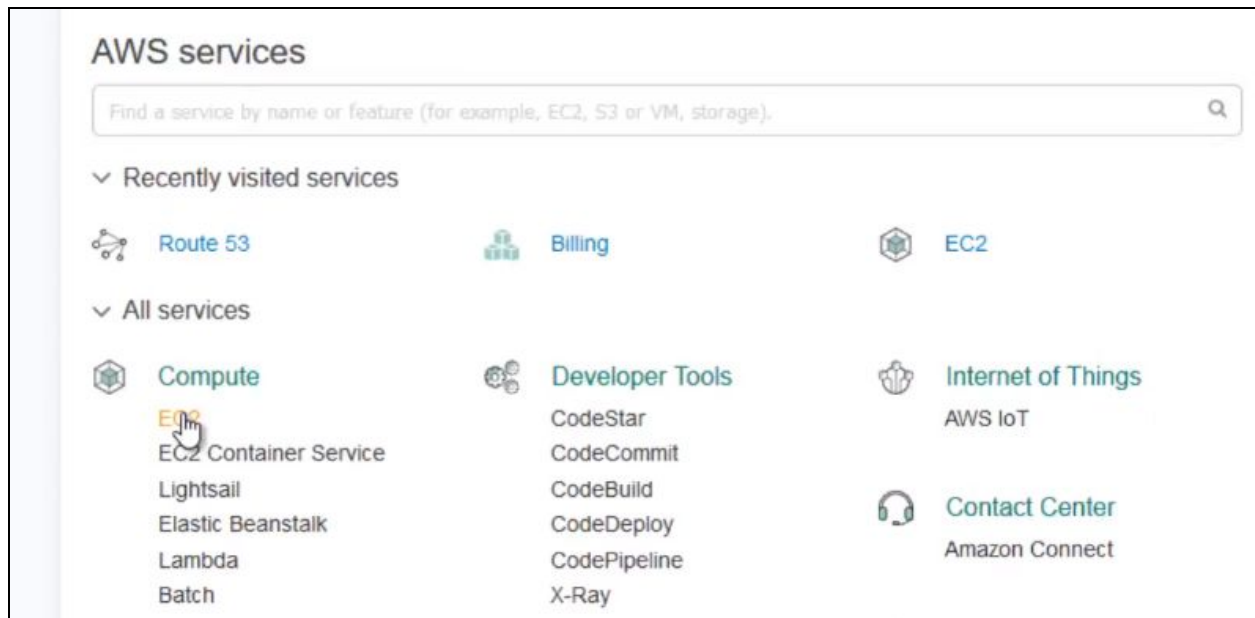
- 1) NS
- 2) SOA

Before going Further, We will implement this below diagram in our Route53 Practical



SO whenever the user , type the thinklinuxacademy.com , Route53 comes into action and it reaches the ELB and behind ELB we have 2 EC2 instances who is serving the page.

First Create 2 EC2 instance
Go to EC2 Dashboard



1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

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 1 to 31 of 31 AMIs

My AMIs
AWS Marketplace
Community AMIs
☒ Free tier only ⓘ

Amazon Linux
Free tier eligible

Amazon Linux AMI 2017.03.0 (HVM), SSD Volume Type - ami-c58c1dd3
The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.
Root device type: ebs Virtualization type: hvm

Red Hat
Free tier eligible

Red Hat Enterprise Linux 7.3 (HVM), SSD Volume Type - ami-b63769a1
Red Hat Enterprise Linux version 7.3 (HVM), EBS General Purpose (SSD) Volume Type

Select

64-bit

Select

64-bit

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

	General purpose	Instance type	VCPUs	Memory (GiB)	Storage
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only

Leave with defaults settings

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Number of instances ⓘ 1 Launch into Auto Scaling Group ⓘ

Purchasing option ⓘ ☐ Request Spot instances

Network ⓘ vpc-ab5d40cd (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

In advance Details, put a boot script which will create a website and installation of httpd server.

```
#!/bin/bash
yum update -y
yum install httpd24 -y
```



```
Service httpd start
chkconfig httpd on
echo "<html><body><h1>Welcome to TLA from Instance1 </h1></body></html>" >
/var/www/html/index.html
```

▼ Advanced Details

User data ⓘ ☒ As text ☐ As file ☐ Input is already base64 encoded

```
#!/bin/bash
yum update -y
yum install httpd24 -y
service httpd start
chkconfig httpd on
```

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review and Launch

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. You can also edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. For more information, see [Amazon EBS volumes](#) and [Amazon EC2 instance store volumes](#) in the Amazon EC2 User Guide for Windows.

Volume Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GiB) ⓘ	Volume Type ⓘ	IOPS ⓘ
Root	/dev/xvda	snap-0120309fef406aa90	8	General Purpose SSD (GP2) ▾	100 / 3000

[Add New Volume](#)

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group

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. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (127 characters maximum)	Value (255 characters maximum)
Type ✓	Instance1 ✓

[Add another tag](#) (Up to 50 tags maximum)

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

Assign a security group. [Create a new security group](#)

☐ Select an existing security group

Security group name: ✓

Description:

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ
SSH ✓	TCP	22	Custom 0.0.0.0/0
HTTP ✓	TCP	80	Custom 0.0.0.0/0, ::/0
HTTPS ✓	TCP	443	Custom 0.0.0.0/0, ::/0

[Add Rule](#)

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Security group name: Route53Lab
Description: launch-wizard-1 created 2017-04-26T10:55:05.940+05:30

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ
SSH	TCP	22	0.0.0.0/0
HTTP	TCP	80	0.0.0.0/0
HTTP	TCP	80	::/0
HTTPS	TCP	443	0.0.0.0/0
HTTPS	TCP	443	::/0

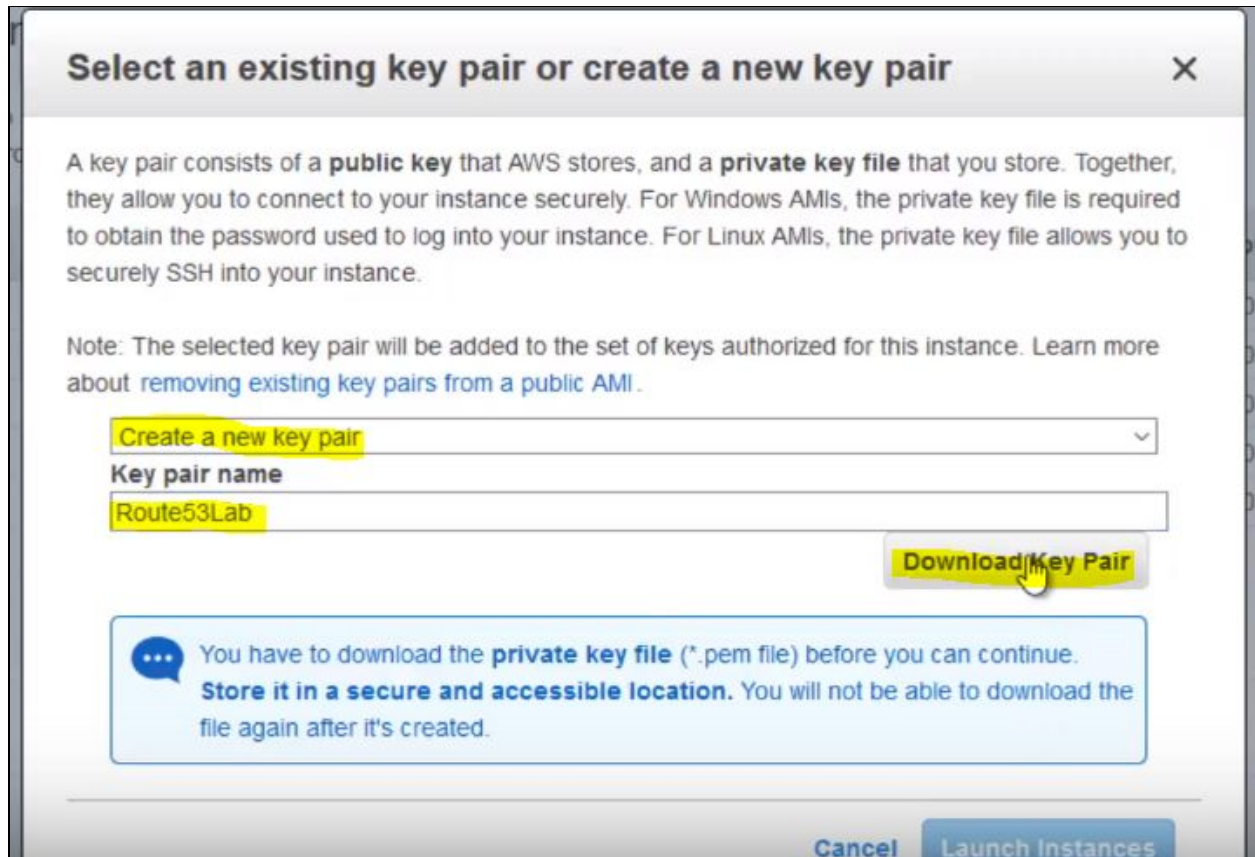
▶ Instance Details [Edit instance details](#)

▶ Storage [Edit storage](#)

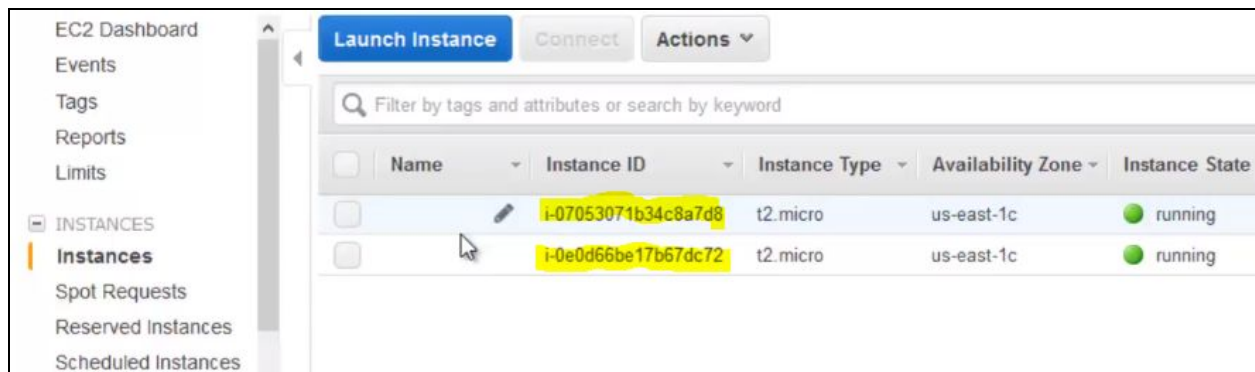
▶ Tags [Edit tags](#) ✓

[Cancel](#) [Previous](#) [Launch Now](#) ✓

Now launch it



Similarly Launch one more instance

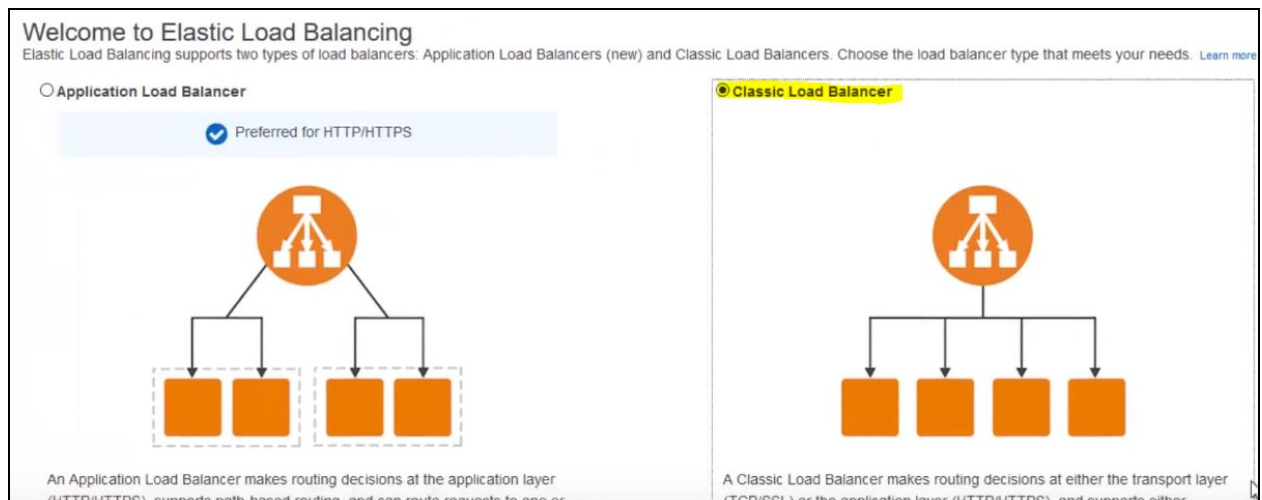
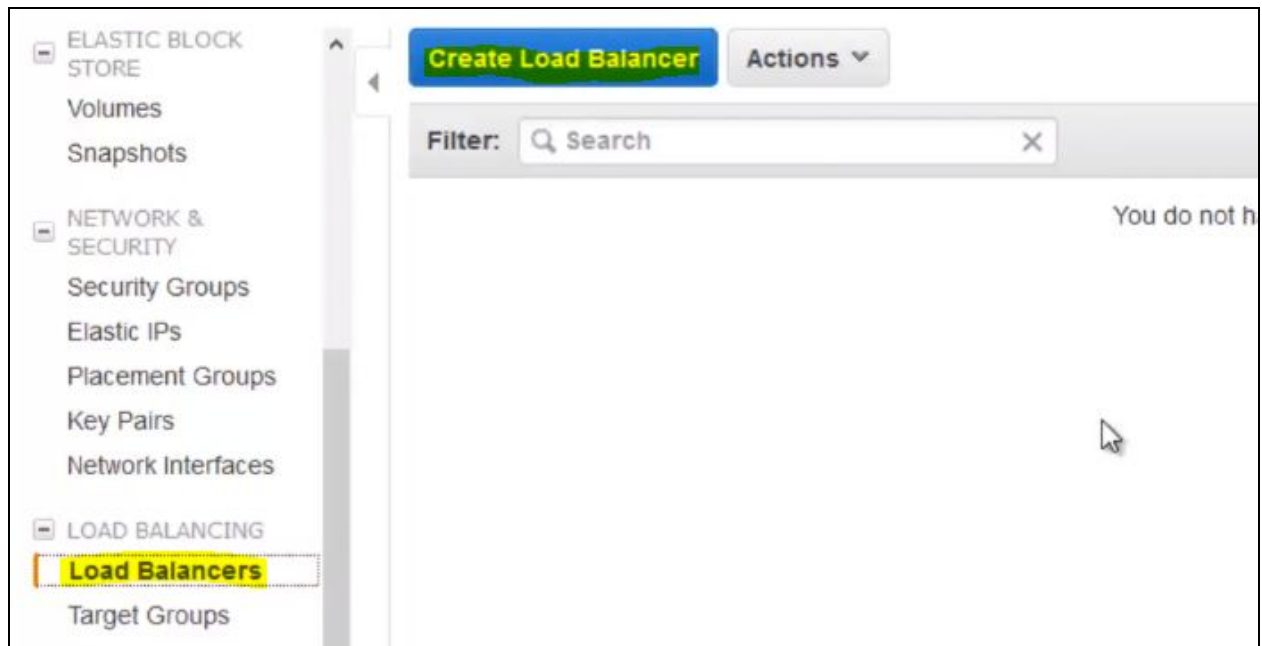


See you can see 2 instances. Make sure httpd is running in both of them with similar boot script (index.html pages)

You can also verify, by copy and paste the public DNS names of EC2 instance in browser.



Create a ELB:



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

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. Then, you can 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, such as a standard web server on port 80.

Load Balancer name:

Create LB Inside:

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

Enable advanced VPC configuration: ☐

Listener Configuration:

Load Balancer Protocol	Load Balancer Port	Instance Protocol
<input type="text" value="HTTP"/>	<input type="text" value="80"/>	<input type="text" value="HTTP"/>

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

Step 2: Assign Security Groups


You have selected the option of having your Elastic Load Balancer inside of a VPC, which allows you to assign security groups to your load balancer. This can be changed at any time.

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

Security Group ID	Name	Description
<input type="checkbox"/> sg-e3e8fc9c	default	default VPC security group
<input checked="" type="checkbox"/> sg-dc7166a3	Route53Lab	launch-wizard-1 created 2017-04-26T10:55:05.940+05:30

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

Step 3: 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 either the HTTPS or the SSL protocol for your front-end connection under [Basic Configuration](#) section. You can also continue with current settings.

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

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 from the load balancer. Customize the health check to meet your specific needs.

Ping Protocol

Ping Port

Ping Path

Advanced Details

Response Timeout seconds

Interval seconds

Unhealthy threshold

Healthy threshold

Add both the EC2 into ELB

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

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-ab5d40cd (172.31.0.0/16)

Instance	Name	State	Security groups
<input checked="" type="checkbox"/>	i-07053071...	running	Route53Lab
<input checked="" type="checkbox"/>	i-0e0d66be...	running	Route53Lab

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 6: Add Tags

Apply tags to your resources to help organize and identify them.

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 resources.

Key	Value
Type	ELB

Create Tag

Load Balancer Creation Status



Successfully created load balancer

Load balancer **MyELB** was successfully created.

Note: It may take a few minutes for your instances to become active in the new load balancer.

Verify now

The screenshot displays the AWS Management Console interface for Load Balancers. The left-hand navigation pane is expanded, showing the 'LOAD BALANCING' section with 'Load Balancers' selected. The main content area features a 'Create Load Balancer' button and a search filter. Below the filter, a table lists the created load balancer 'MyELB' with its DNS name and VPC ID. At the bottom, a table lists the instances associated with the load balancer, both of which are currently in an 'OutOfService' state.

Name	DNS name	State	VPC ID
MyELB	MyELB-602204810.us-east-1.elb.amazonaws.com	Active	vpc-ab5d40cd

Instance ID	Name	Availability Zone	Status	Actions
i-07053071b34c8a7d8		us-east-1c	OutOfService	Remove from Load Balancer
i-0e0d66be17b67dc72		us-east-1c	OutOfService	Remove from Load Balancer

After sometime, Instances status will be in-service

You can verify by copy and paste the ELB DNS address in browser

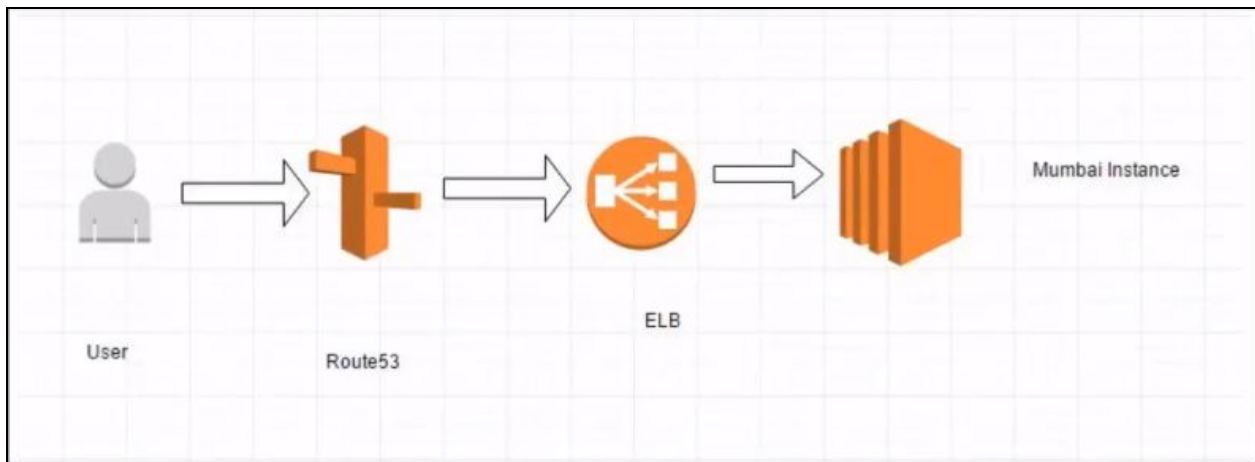
<http://myelb-89010101.us-east-1.elb.amazonaws.com>

You will the page as "Welcome to TLA from Instance1" one time

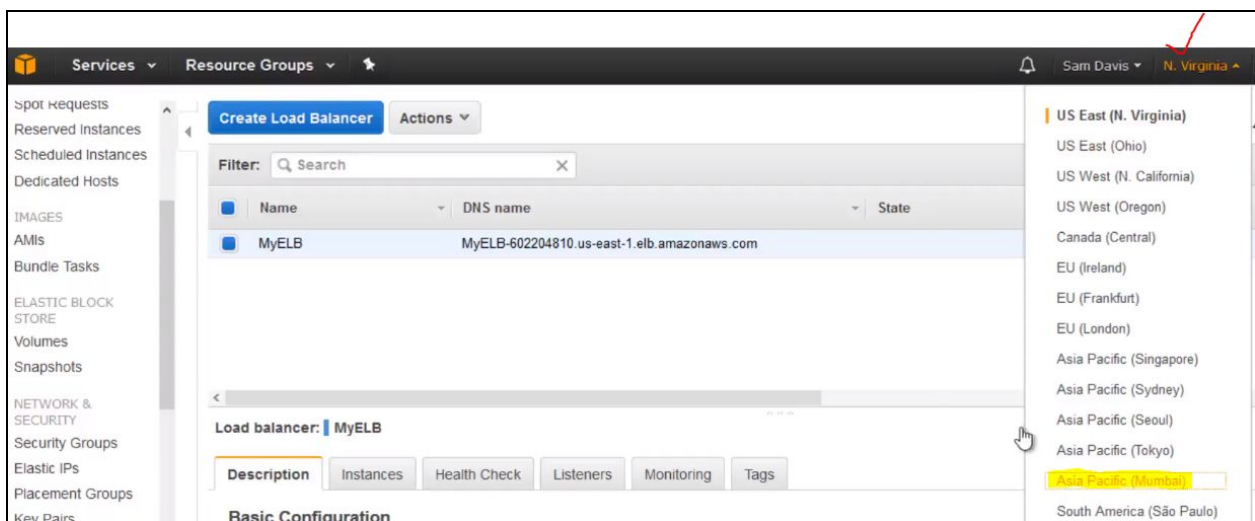
You will the page as "Welcome to TLA from Instance2" second time

Same ELB is serving the traffic from both instances

You can implement the below setup also.



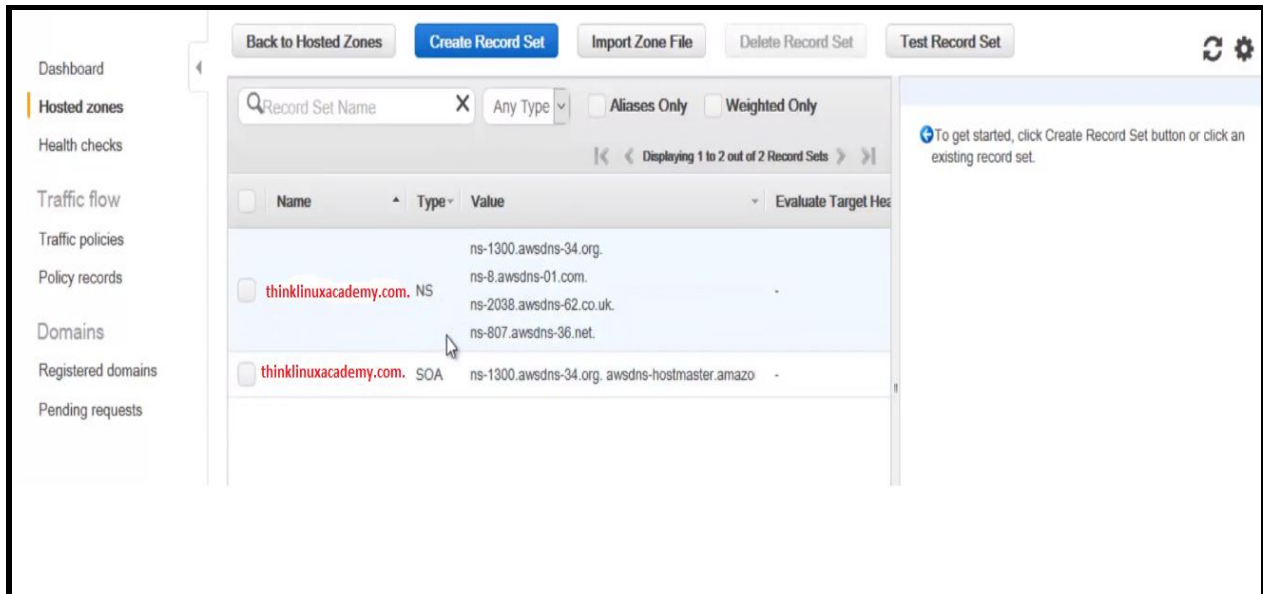
Switch your account to mumbai region



Create one EC2 and then ELB and add that EC2 into this ELB
Verify it is working or not using EC2 DNS ip and using ELB DNS ip

Configure Route53

Go to ROute53
Goto Hosted Zone



Click on “Create Record Set”

Create Record Set

Name: thinklinuxacademy.com.

Type: A – IPv4 address

Alias: ☐ Yes ☒ No

TTL (Seconds): 1m 5m 1h 1d

Value:

IPv4 address. Enter multiple addresses on separate lines.
Example:
192.0.2.235
198.51.100.234

Routing Policy: Simple

Route 53 responds to queries based only on the values in this record.
[Learn More](#)

Create

Name:

You can enter www in the Name section

Or you can leave empty (it is called naked domain) so that you can access the site as thinklinuxacademy.com

Alias Target:

Here you can enter the ELB address

Alias Target:

You can also type:

- CloudFront distribution
- Elastic Beanstalk environment
- ELB load balancer
- S3 website endpoint
- Resource record set in this hosted zone

[Learn More](#)

Routing Policy:

Route 53 responds to queries based only on the values in this record.

[Learn More](#)

MyELB-602204810.us-east-1.elb.amazonaws.com

MumbaiELB-2015448347.ap-south-1.elb.amazonaws.com

— CloudFront distributions —

No Targets Available

— Elastic Beanstalk environments —

No Targets Available

— Record sets in this hosted zone —

No Targets Available

Routing Policy:

Type: A – IPv4 address

Alias: ☒ Yes ☐ No

Alias Target: dualstack.MyELB-602204810.us-east-1.elb.amazonaws.com

Alias Hosted Zone ID: Z35SXDOTRQ7X7K

You can also type the domain name for the resource. Examples:

- CloudFront distribution domain name: d1111111abcdef8.cloudfront.net
- Elastic Beanstalk environment CNAME: example.elasticbeanstalk.com
- ELB load balancer DNS name: example-1.us-east-1.elb.amazonaws.com
- S3 website endpoint: s3-website-us-east-2.amazonaws.com
- Resource record set in this hosted zone: www.example.com

[Learn More](#)

Routing Policy: Simple

Route 53 responds to queries based only on the values in this record.

[Learn More](#)

Evaluate Target Health:

Simple

Weighted

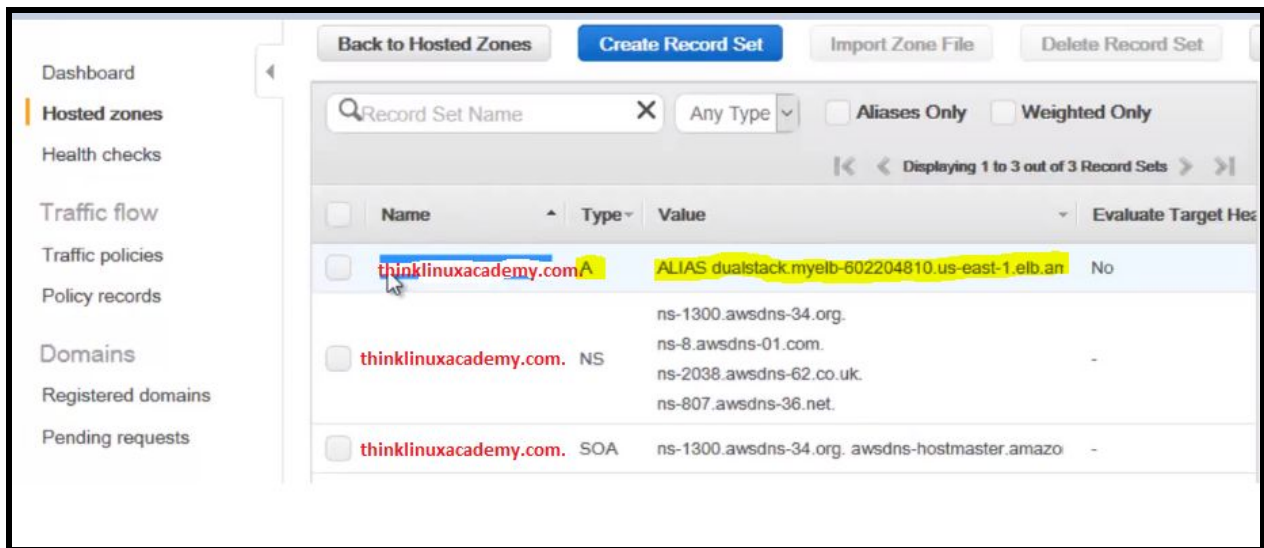
Latency

Failover

Geolocation

[Create](#)

[Learn More](#)



Because of this “A” Record, whenever you click on website it goes to this ELB as per this configuration.



Second time



The diagram shows a User icon on the left. An arrow points from the User to a Route53 icon in the center. From the Route53 icon, two arrows branch out to the right. The top arrow points to a stack of orange rectangles labeled 'EC2 instance/Resource1' and is labeled with the number '75'. The bottom arrow points to another stack of orange rectangles labeled 'EC2 instance/Resource2' and is labeled with the number '25'. This represents a 75% to 25% traffic split.

1st set of EC2 instances is having more weight in our above case, so definitely, most of the traffic is taken care by 1set of EC2 instances. If less weight then it will take care next.

Name: (keep it empty called as naked domain)

Alias: yes and select the proper ELB as below

Create Record Set

Name: thinklinuxacademy.com.

Type: A - IPv4 address

Alias: ☒ Yes ☐ No

Alias Target:

You can also type — *S3 website endpoints* —

- CloudFront distributions
- Elastic Beanstalk environments
- ELB load balancers
- S3 website endpoints
- Resource records

No Targets Available

— *ELB Application load balancers* —

No Targets Available

— *ELB Classic load balancers* —

MyELB-602204810-us-east-1.elb.amazonaws.com

MumbaiELB-2015448347.ap-south-1.elb.amazonaws.com

— *CloudFront distributions* —

Routing Policy

Route 53 responds to queries based on weighting that you specify in this and other record sets that have the same name and type. [Learn More](#)

Routing Policy:

Routing Policy: Weighted

Route 53 responds to queries based on weighting that you specify in this and other record sets that have the same name and type. [Learn More](#)

Weight: 75

Set ID: NVirginia

Description of this record set that is unique within the group of weighted sets.

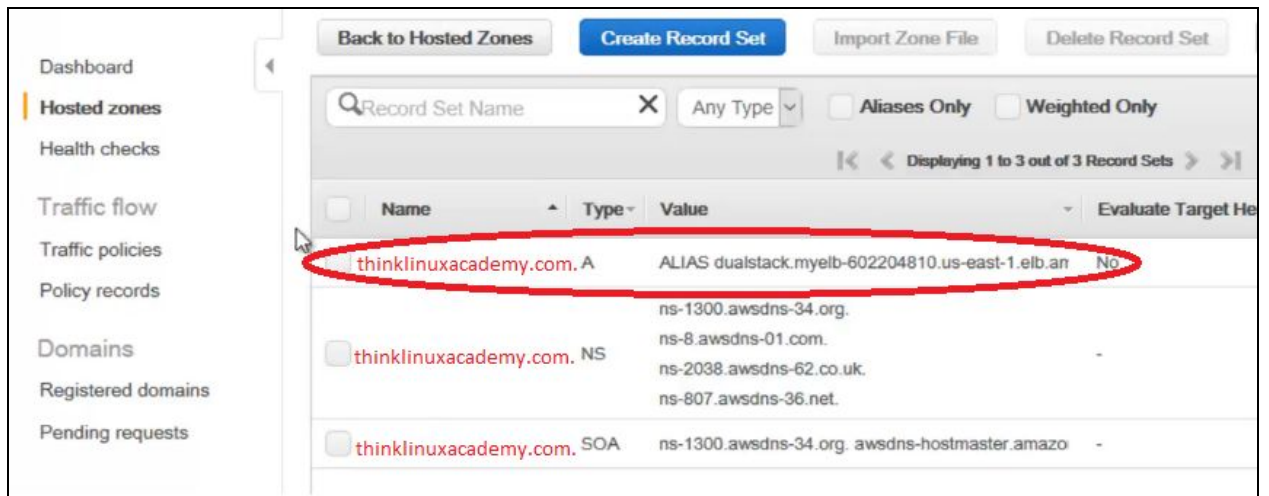
Example:
My Seattle Data Center

Evaluate Target Health: ☐ Yes ☒ No

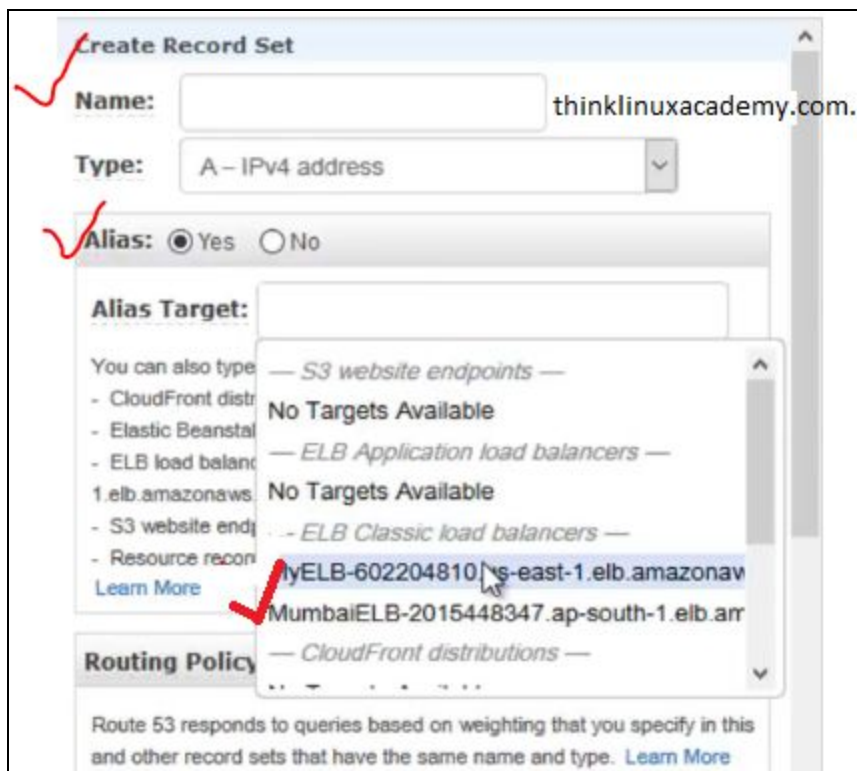
Associate with Health Check: ☐ Yes ☒ No

[Create](#)

Then you can see the below entry in the main configuration



Then go back and create one more record set



- Elastic Beanstalk environment CNAME: example.elasticbeanstalk.com
 - ELB load balancer DNS name: example-1.us-east-1.elb.amazonaws.com
 - S3 website endpoint: s3-website.us-east-2.amazonaws.com
 - Resource record set in this hosted zone: www.example.com
[Learn More](#)

Routing Policy: Weighted

Route 53 responds to routing queries for this record set. Click each option for more information.

Weight: 25

Set ID: Mumbai

Description of this record set that is unique within the group of weighted sets.
 Example:
 My Seattle Data Center

Evaluate Target Health: ☐ Yes ☒ No

Associate with Health Check: ☐ Yes ☒ No

Create

Now you can see 2 entry of A Record

Dashboard
Hosted zones
 Health checks
 Traffic flow
 Traffic policies
 Policy records
 Domains
 Registered domains
 Pending requests

Back to Hosted Zones Create Record Set Import Zone File Delete Record Set

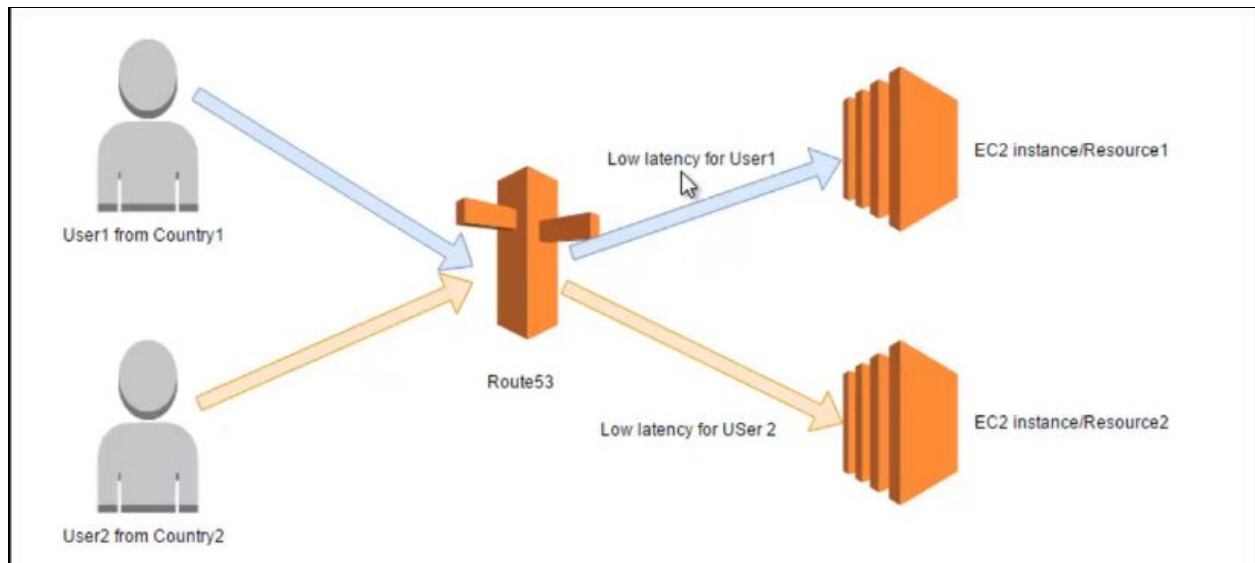
Record Set Name X Any Type Aliases Only Weighted Only

Displaying 1 to 4 out of 4 Record Sets

Name	Type	Value	Evaluate Target Health
thinklinuxacademy.com.	A	ALIAS dualstack.mumbaielb-2015448347.ap-south-	No
thinklinuxacademy.com.	A	ALIAS dualstack.myelb-602204810.us-east-1.elb.an	No
thinklinuxacademy.com.	NS	ns-1300.awsdns-34.org. ns-8.awsdns-01.com. ns-2038.awsdns-62.co.uk. ns-807.awsdns-36.net.	-
thinklinuxacademy.com.	SOA	ns-1300.awsdns-34.org. awsdns-hostmaster.amazo	-

Due to this configuration, most of the traffic handle by north virginia ELB (75% of time)
 Few times the traffic is handled by mumbai ELB (25% of time). Refresh many times

Latency based Routing:



Deleted Record of last weighted based routing

Now create a new record for Latency based routing

Alias: ☒ Yes ☐ No

Alias Target:

You can also type the domain name for the resource. Examples:

- CloudFront distribution domain name: d111111abcdef8.cloudfront.net
- Elastic Beanstalk environment CNAME: example.elasticbeanstalk.com
- ELB load balancer DNS name: example-1.us-east-1.elb.amazonaws.com
- S3 website endpoint: s3-website.us-east-2.amazonaws.com
- Resource record

[Learn More](#)

Routing Policy

Route 53 responds and other records

Region:

Set ID:

— S3 website endpoints —

No Targets Available

— ELB Application load balancers —

No Targets Available

— ELB Classic load balancers —

MyELB-602204810.us-east-1.elb.amazonaws.com

MumbaiELB-2015446347.ap-south-1.elb.amazonaws.com

— CloudFront distributions —

- Elastic Beanstalk environment CNAME: example.elasticbeanstalk.com
 - ELB load balancer DNS name: example-1.us-east-1.elb.amazonaws.com
 - S3 website endpoint: s3-website.us-east-2.amazonaws.com
 - Resource record set in this hosted zone: www.example.com
[Learn More](#)

Routing Policy: Latency

Route 53 responds to queries based on regions that you specify in this and other record sets that have the same name and type. [Learn More](#)

Region: us-east-1

Set ID: NVirgina

Description of this record set that is unique within the group of latency sets.
 Example:
 My Seattle Data Center

Evaluate Target Health: ☐ Yes ☒ No

Associate with Health Check: ☐ Yes ☒ No

Create

CREATE ONE MORE RECORD IN LATENCY

Alias: ☒ Yes ☐ No

Alias Target: Enter target name

You can also type

- CloudFront distr
- Elastic Beanstalk
- ELB load balanc
- S3 website endp
- Resource recor

[Learn More](#)

Routing Policy samthecloudguy.click.

MyELB-602204810.us-east-1.elb.amazonaws.com

MumbaiELB-2015448347.ap-south-1.elb.amazonaws.com

No Targets Available

No Targets Available

Routing Policy: Latency

Route 53 responds to queries based on regions that you specify in this and other record sets that have the same name and type. [Learn More](#)

Region: ap-south-1

Set ID: Mumbai

Description of this record set that is unique within the group of latency sets.
Example:
My Seattle Data Center

Create

Now you can see the configuration as below:

Dashboard

Hosted zones

Health checks

Traffic flow

Traffic policies

Policy records

Domains

Registered domains

Pending requests

Back to Hosted Zones Create Record Set Import Zone File Delete Record Set

Record Set Name X Any Type Aliases Only Weighted Only

Displaying 1 to 4 out of 4 Record Sets

Name	Type	Value	Evaluate Target Health
<input checked="" type="checkbox"/> thinklinuxacademy.com.	A	ALIAS dualstack.mumbaielb-2015448347.ap-south-	No
<input type="checkbox"/> thinklinuxacademy.com.	A	ALIAS dualstack.myelb-602204810.us-east-1.elb.am	No
<input type="checkbox"/> thinklinuxacademy.com.NS	NS	ns-1300.awsdns-34.org. ns-8.awsdns-01.com. ns-2038.awsdns-62.co.uk. ns-807.awsdns-36.net.	-
<input type="checkbox"/> thinklinuxacademy.com.	SOA	ns-1300.awsdns-34.org. awsdns-hostmaster.amazo	-

Now you can check from india location . Try to open the website of thinklinuxacademy.com
Then you will see the message from Mumbai instance, that means it is serving from mumbai location.