

Route-53

Amazon Route 53 is a highly available and scalable Domain Name System (DNS) web service.

You can use Route 53 to perform three main functions in any combination: domain registration, DNS routing, and health checking.

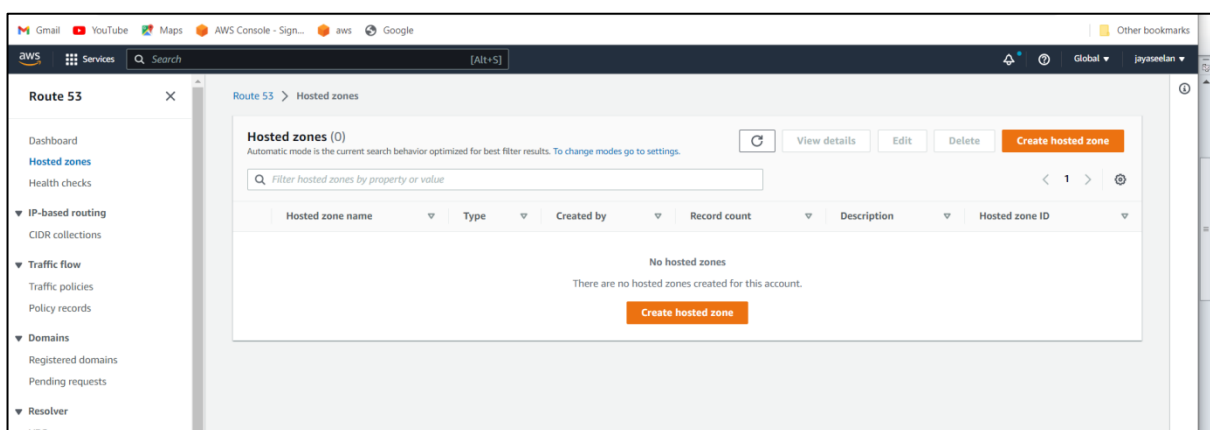
Types of route-53

- Simple routing.
- Failover routing.
- Geolocation routing.
- Geoproximity routing (traffic flow only)
- Latency-based routing.
- IP-based routing.
- Multivalue answer routing.
- Weighted routing.

Steps to create route-53:

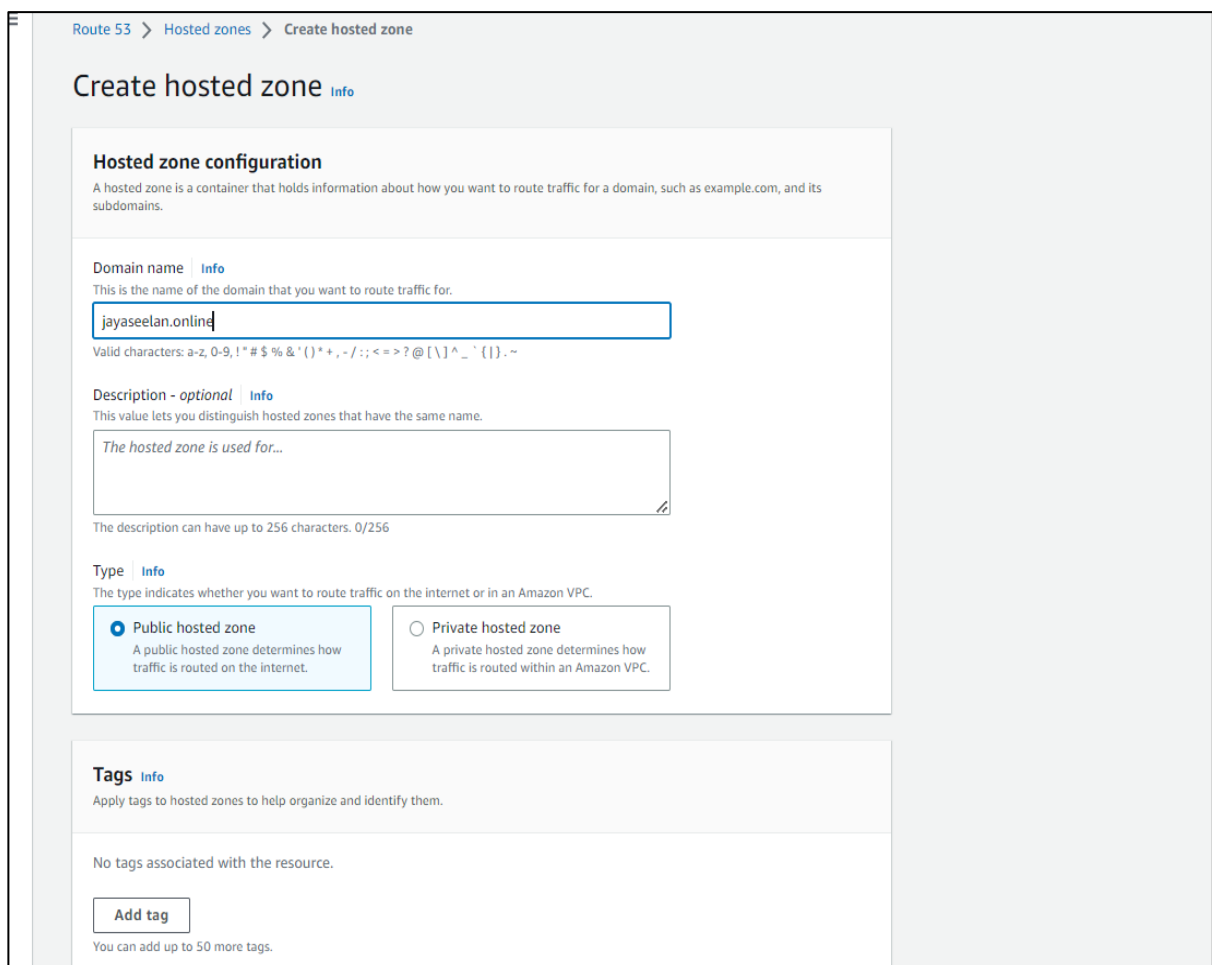
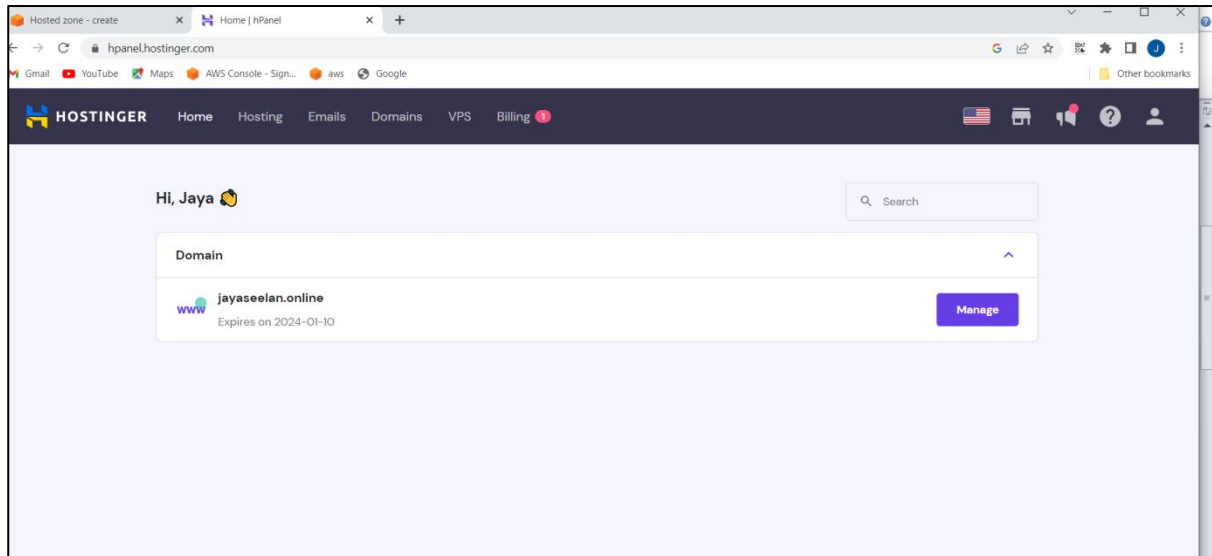
Step1:create hosted zone

Route53--->hosted zone---->create hosted zone

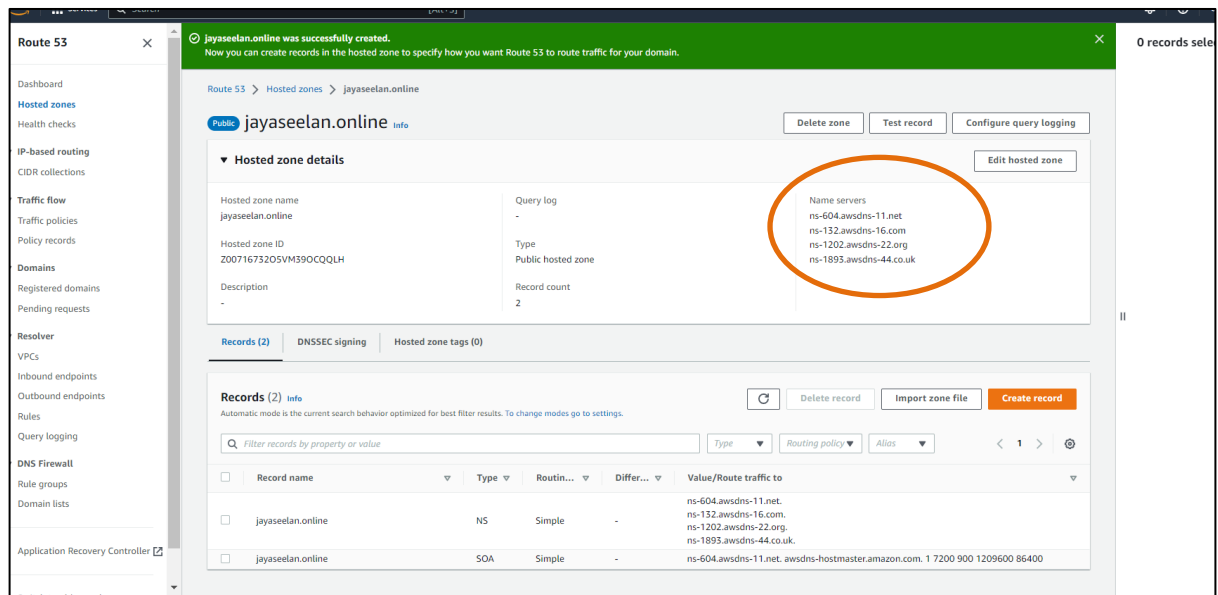


Domain name(jayaseelan.online)---->type(public hosted zone)--->create

Hostinger--->login mail--->show my domain

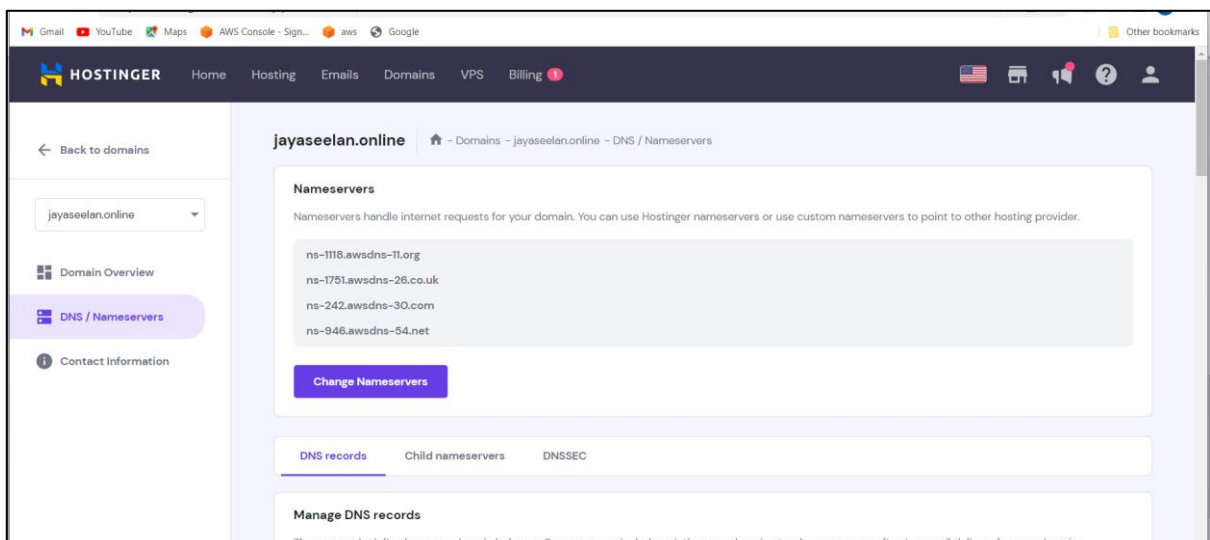
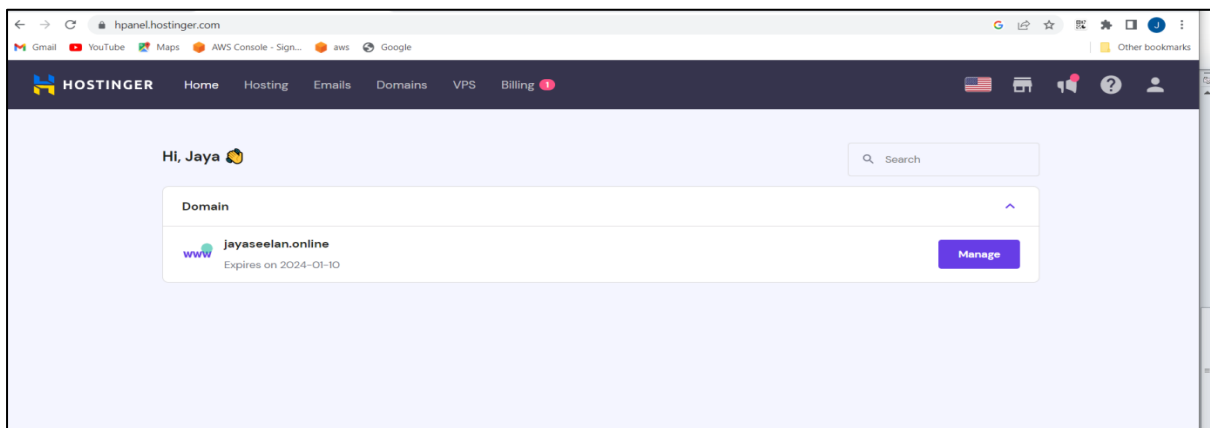


Hosted zone created.

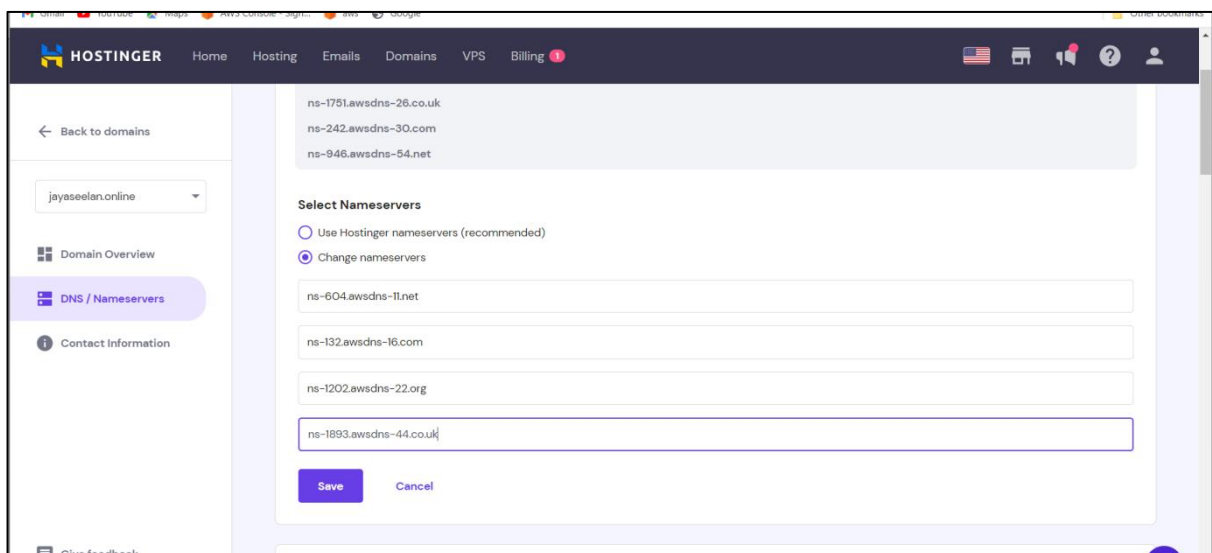
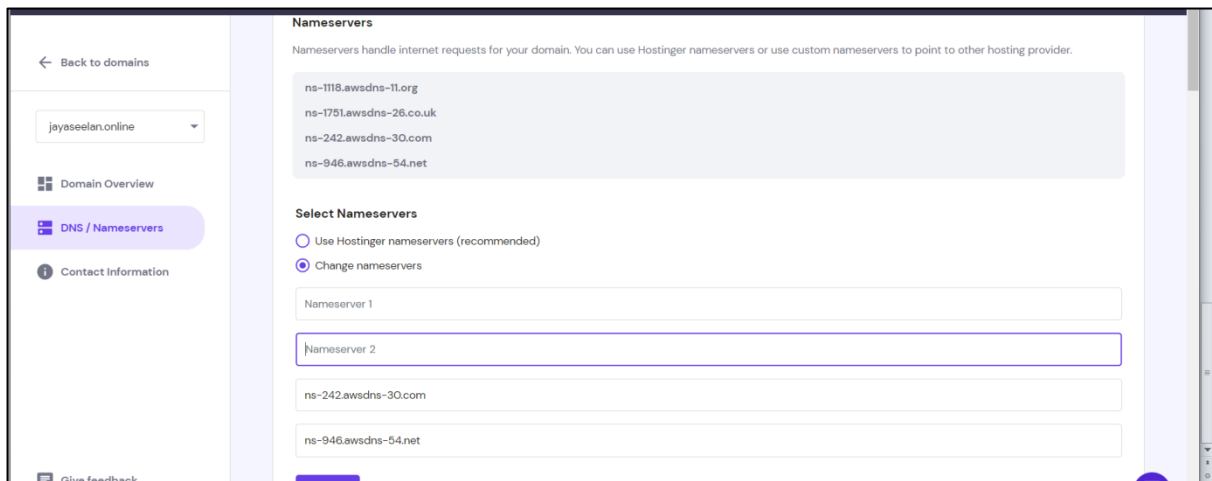


Step2:change name server

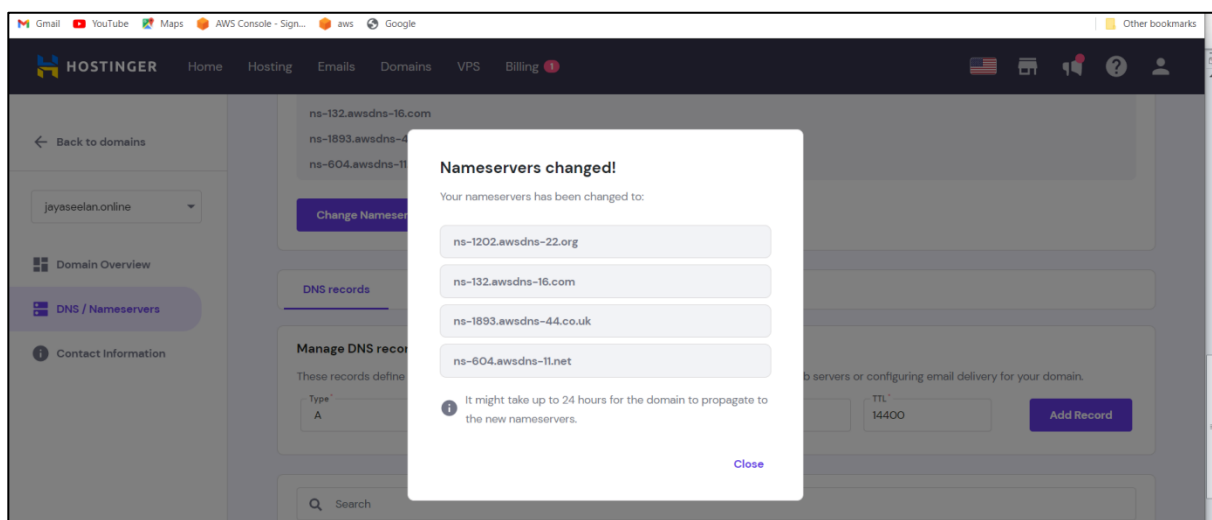
Hostinger---->manage--->dns/name server---->click change name server



Already 4 name server show that delete and put r-53 hosted zone name server---->save



Name server change success.



Step3: launch 2 ec2 linux instance ---> security group (ssh and http)---->advanced details(any bash script).

Two server created..

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 D
server1	i-0900640ffb09b2d51	Running	t2.micro	2/2 checks passed	No alarms	ap-southeast-2c	ec2-13-55-12
server2	i-03f2d3dad1e10148a	Running	t2.micro	2/2 checks passed	No alarms	ap-southeast-2c	ec2-3-26-39-

Instance: i-03f2d3dad1e10148a (server1)		
Instance ID	Public IPv4 address	Private IPv4 addresses
i-03f2d3dad1e10148a (server1)	3.26.39.188 open address	172.31.30.189

Server2 login--->content change --->#sudo -i--->#cd /var/www/html----->vi index.html --->change content(hi iam seelan2)

```

Last login: Wed Jan 11 10:14:44 2023 from ec2-13-239-158-4.ap-southeast-2.compute.amazonaws.com
[ec2-user@ip-172-31-30-189 ~]$ sudo -i
[root@ip-172-31-30-189 ~]# ls
[root@ip-172-31-30-189 ~]# cd /var/www/html
[root@ip-172-31-30-189 html]# ls
index.html
[root@ip-172-31-30-189 html]# vi index.html
[root@ip-172-31-30-189 html]# cat index.html
hi iam seelan2
[root@ip-172-31-30-189 html]#

```

Simple routing

Simple routing policy Use for a single resource that performs a given function for your domain, for example, a web server that serves content for the example.com website. You can use simple routing to create records in a private hosted zone.

Steps to create simple routing record

Step1: hosted zone(jayaseelan.online)---->create record--->value(any one server ip copy and paste)----->TTL(time to leave)-->60 sec----->record type(A-routes traffic to an ipv4 address and some aws resource)----->routing policy(simple routing policy)----->create records

Route 53 > Hosted zones > jayaseelan.online > Create record

Create record [Info](#)

Quick create record [Switch to wizard](#)

Record 1 [Delete](#)

Record name [Info](#) jayaseelan.online **Record type** [Info](#)

Keep blank to create a record for the root domain.

☒ **Alias**

Value [Info](#)

Enter multiple values on separate lines.

TTL (seconds) [Info](#) **Routing policy** [Info](#)

Recommended values: 60 to 172800 (two days)

[View existing records](#)

Simple routing record created..

Record for jayaseelan.online was successfully created.
Route 53 propagates your changes to all of the Route 53 authoritative DNS servers within 60 seconds. Use "View status" button to check propagation status.

Route 53 > Hosted zones > jayaseelan.online

Public jayaseelan.online [Info](#) [Delete zone](#) [Test record](#) [Configure query logging](#)

Hosted zone details [Edit hosted zone](#)

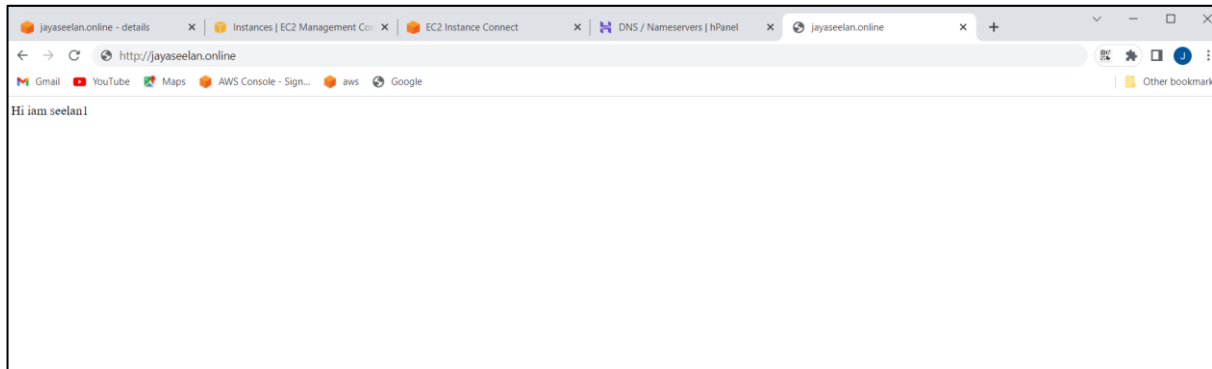
Records (3) [DNSSEC signing](#) [Hosted zone tags \(0\)](#)

Records (3) [Info](#) [Delete record](#) [Import zone file](#) [Create record](#)

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

<input type="checkbox"/>	Record name	Type	Routing...	Differ...	Value/Route traffic to
<input type="checkbox"/>	jayaseelan.online	A	Simple	-	13.55.121.73
<input type="checkbox"/>	jayaseelan.online	NS	Simple	-	ns-604.awsdns-11.net, ns-132.awsdns-16.com, ns-1202.awsdns-22.org, ns-1893.awsdns-44.co.uk
<input type="checkbox"/>	jayaseelan.online	SOA	Simple	-	ns-604.awsdns-11.net. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400

Now put chrome text page <http://jayaseelan.online>----> it show server content



This is simple routing..

Weighted routing

Weighted routing lets you associate multiple resources with a single domain name (example.com) or subdomain name (acme.example.com) and choose how much traffic is routed to each resource.

This can be useful for a variety of purposes, including load balancing and testing new versions of software.

Steps to create weighted record

Step1: hosted zone(jayaseelan.online)---->create record--->value (**server1 ip** copy and paste)----->TTL(time to leave)---->60 sec----->record type(A-routes traffic to an ipv4 addres and some aws resource)---->routing policy(weighted routing)----->weight(**200**)--->create records

Route 53 > Hosted zones > jayaseelan.online > Create record

Create record [Info](#)

Quick create record [Switch to wizard](#)

▼ Record 1 [Delete](#)

Record name [Info](#)

subdomain jayaseelan.online

Keep blank to create a record for the root domain.

Record type [Info](#)

A – Routes traffic to an IPv4 address and some AWS resources

Alias

Value [Info](#)

13.55.121.73

Enter multiple values on separate lines.

TTL (seconds) [Info](#)

60 +1m 1h 1d

Recommended values: 60 to 172800 (two days)

Routing policy [Info](#)

Weighted

Weight

200

The weight can be a number between 0 and 255. If you specify 0, Route 53 stops responding to DNS queries using this record.

Health check ID - optional [Info](#)

Choose health check

Record ID [Info](#)

my

Step2: hosted zone(jayaseelan.online)---->create record--->value (server2 ip copy and paste)----->TTL(time to leave)---->60 sec----->record type(A-routes traffic to an ipv4 address and some aws resource)---->routing policy(weighted routing)----->weight(**100**)--->create records

Route 53 > Hosted zones > jayaseelan.online > Create record

Create record [Info](#)

Quick create record [Switch to wizard](#)

▼ Record 1 [Delete](#)

Record name [Info](#)

subdomain jayaseelan.online

Keep blank to create a record for the root domain.

Record type [Info](#)

A – Routes traffic to an IPv4 address and some AWS resources

Alias

Value [Info](#)

3.26.39.188

Enter multiple values on separate lines.

TTL (seconds) [Info](#)

60 +1m 1h 1d

Recommended values: 60 to 172800 (two days)

Routing policy [Info](#)

Weighted

Weight

100

The weight can be a number between 0 and 255. If you specify 0, Route 53 stops responding to DNS queries using this record.

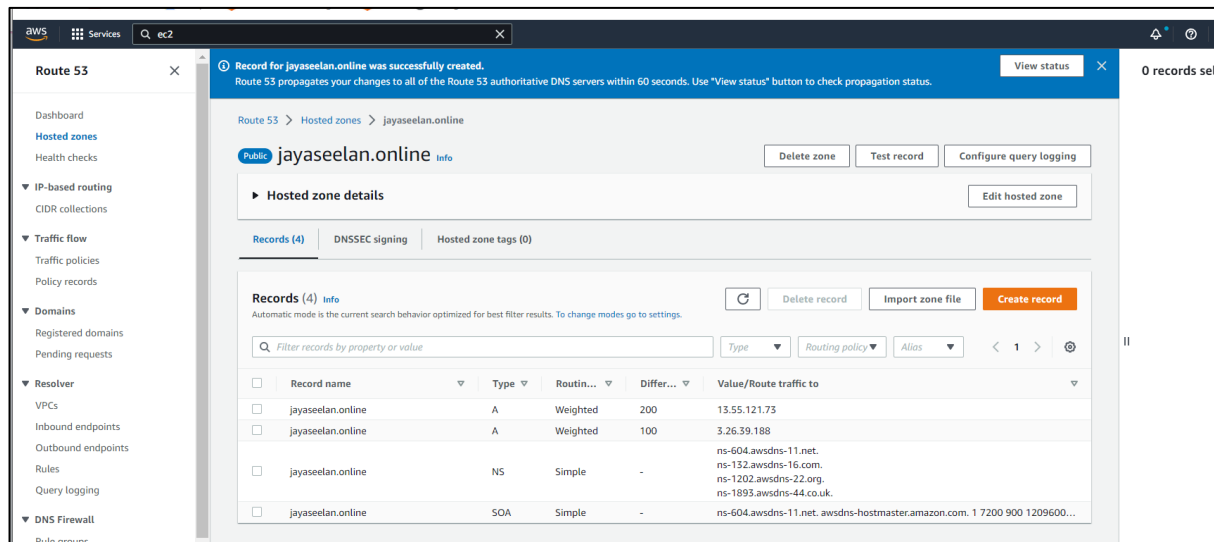
Health check ID - optional [Info](#)

Choose health check

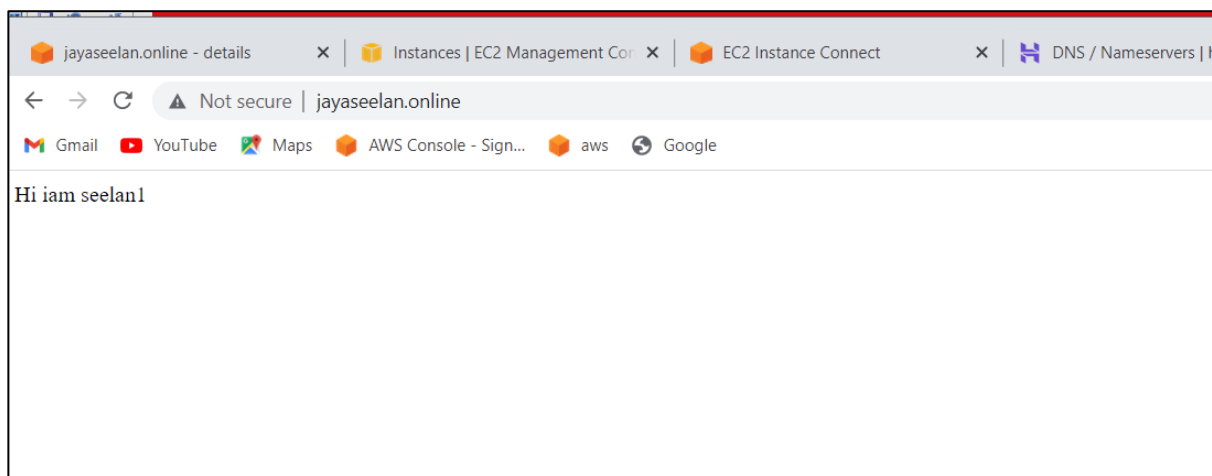
Record ID [Info](#)

ss

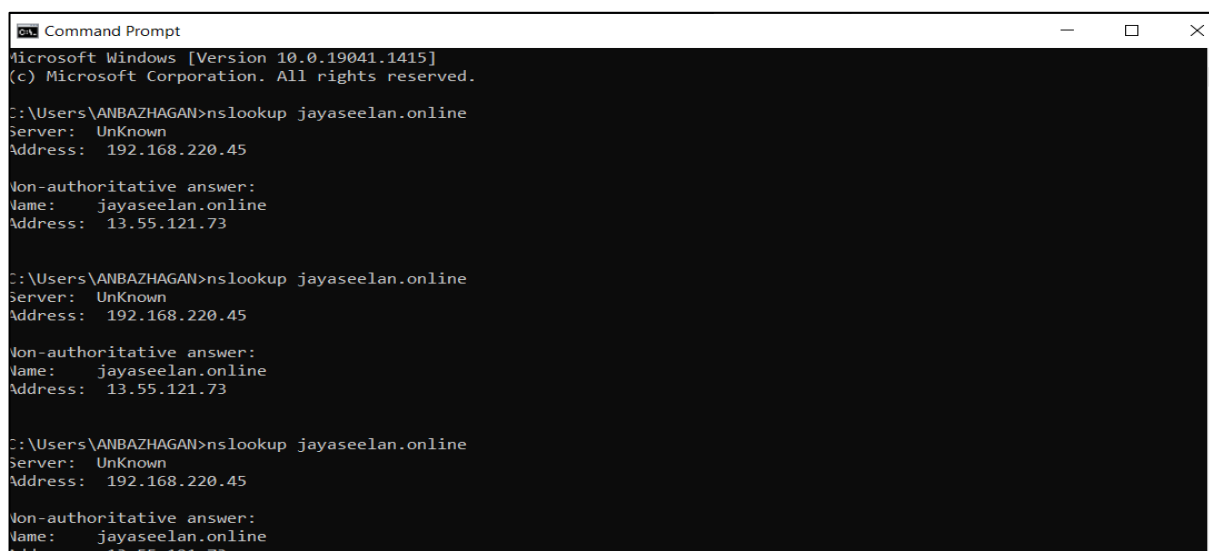
Created two record for server1 & server2



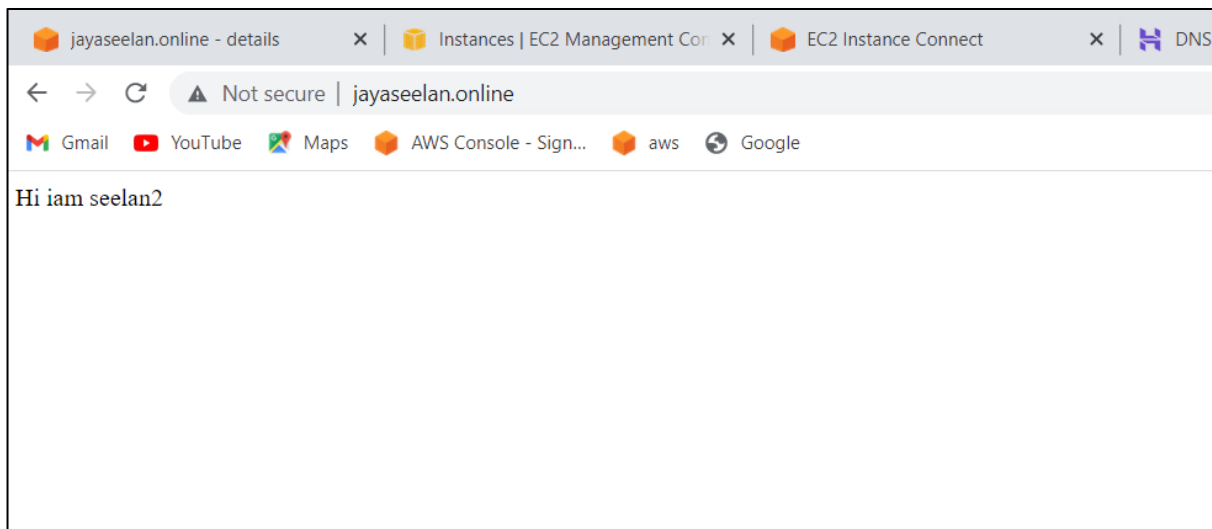
Now put chrome text page <http://jayaseelan.online>----> it will which server is high weight thar server show content show



Now check using **cmd** prompt ---->nslookup jayaseelan.online--->it will show which server is high wait that ip shown



Now change server1 wight(100)---->server2 weight(200)---->it will show server2 content(that means server 2 is high weight)



```
C:\Users\ANBAZHAGAN>nslookup jayaseelan.online
Server:      UnKnown
Address:     192.168.220.45

Non-authoritative answer:
Name:   jayaseelan.online
Address: 13.55.121.73

C:\Users\ANBAZHAGAN>nslookup jayaseelan.online
Server:      UnKnown
Address:     192.168.220.45

Non-authoritative answer:
Name:   jayaseelan.online
Address: 3.26.39.188

C:\Users\ANBAZHAGAN>nslookup jayaseelan.online
Server:      UnKnown
Address:     192.168.220.45

Non-authoritative answer:
Name:   jayaseelan.online
Address: 3.26.39.188

C:\Users\ANBAZHAGAN>
```

This is weighted routing...

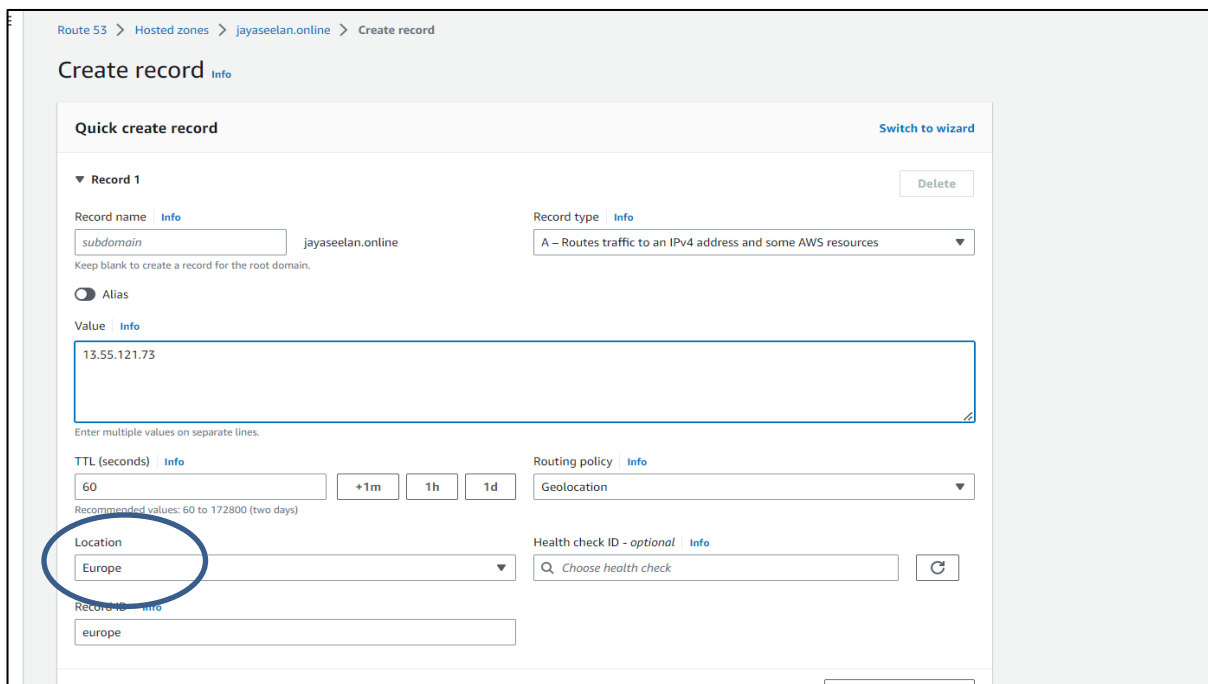
Geolocation routing:

Geolocation routing lets you choose the resources that serve your traffic based on the geographic location of your users, meaning the location that DNS queries originate from.

For example, you might want all queries from Europe to be routed to an ELB load balancer in the Frankfurt region.

Steps to create geolocation record:

Step1: hosted zone(jayaseelan.online)---->create record--->value (**server1 ip** copy and paste)----->TTL(time to leave)---->60 sec----->record type(A-routes traffic to an ipv4 address and some aws resource)---->routing policy(geolocation routing)---->location(**Europe**)----->create records



The screenshot shows the AWS Route 53 'Create record' console for the hosted zone 'jayaseelan.online'. The 'Quick create record' section is active. The 'Record 1' configuration is as follows:

- Record name:** subdomain (with a note: 'Keep blank to create a record for the root domain.')
- Record type:** A - Routes traffic to an IPv4 address and some AWS resources
- Value:** 13.55.121.73 (with a note: 'Enter multiple values on separate lines.')
- TTL (seconds):** 60 (with buttons for +1m, 1h, 1d and a note: 'Recommended values: 60 to 172800 (two days)')
- Routing policy:** Geolocation
- Location:** Europe (this dropdown is circled in blue)
- Health check ID - optional:** Choose health check (with a refresh icon)
- Record ID:** europe

Step2: hosted zone(jayaseelan.online)---->create record--->value (**server2 ip** copy and paste)----->TTL(time to leave)---->60 sec----->record type(A-routes traffic to an ipv4 address and some aws resource)---->routing policy(geolocation routing)---->location(**asia**)----->create records

aws Services ec2

Route 53 > Hosted zones > jayaseelan.online > Create record

Create record Info

Quick create record Switch to wizard

▼ Record 1 Delete

Record name Info jayaseelan.online Keep blank to create a record for the root domain.

Record type Info A - Routes traffic to an IPv4 address and some AWS resources

☐ Alias

Value Info

Enter multiple values on separate lines.

TTL (seconds) Info Recommended values: 60 to 172800 (two days) +1m 1h 1d

Routing policy Info Geolocation

Location Asia

Health check ID - optional Info Choose health check

Record name Info

created two geolocation record

aws Services ec2

Route 53 > Hosted zones > jayaseelan.online

Record for jayaseelan.online was successfully created. Route 53 propagates your changes to all of the Route 53 authoritative DNS servers within 60 seconds. Use "View status" button to check propagation status. View status 2 records

Public jayaseelan.online Info Delete zone Test record Configure query logging

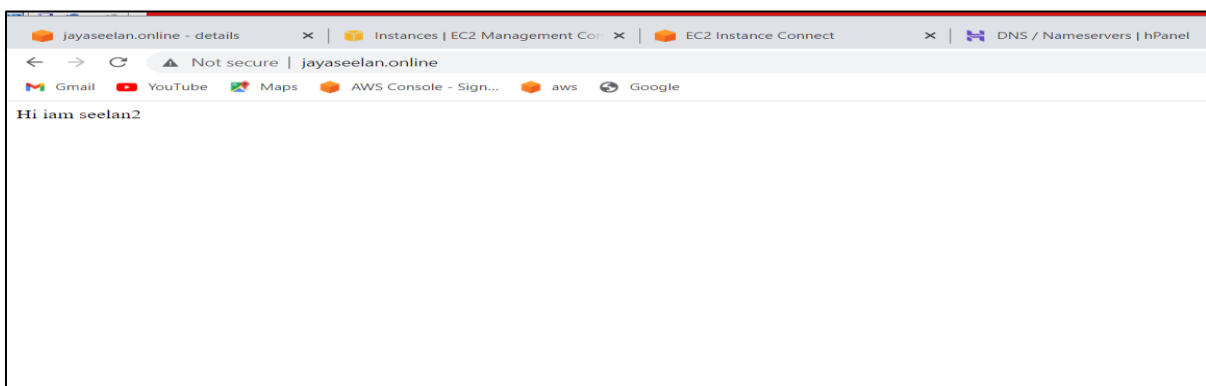
Hosted zone details Edit hosted zone

Records (4) DNSSEC signing Hosted zone tags (0)

Records (2/4) Info Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings. Filter records by property or value Type Routing policy Alias < 1 > Refresh Delete records Import zone file Create record

<input type="checkbox"/>	Record name	Type	Routing policy	Difference	Value/Route traffic to
<input checked="" type="checkbox"/>	jayaseelan.online	A	Geolocation	Asia	3.26.39.188
<input checked="" type="checkbox"/>	jayaseelan.online	A	Geolocation	Europe	13.55.121.73
<input type="checkbox"/>	jayaseelan.online	NS	Simple	-	ns-604.awsdns-11.net, ns-132.awsdns-16.com, ns-1202.awsdns-22.org, ns-1893.awsdns-44.co.uk.
<input type="checkbox"/>	jayaseelan.online	SOA	Simple	-	ns-604.awsdns-11.net. awsdns-hostmaster.amazon.com. 1 7200 900 1209600...

Now put chrome text page <http://jayaseelan.online>----> it will show asia location server only (hi iam seelan2---->this is 2nd server content)



Now check using **cmd** prompt ---->nslookup jayaseelan.online---
>it will show asia location server ip(2nd server ip shown)

```
Command Prompt
Microsoft Windows [Version 10.0.19041.1415]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ANBAZHAGAN>nslookup jayaseelan.online
Server:      UnKnown
Address:     192.168.220.45

Non-authoritative answer:
Name:   jayaseelan.online
Address: 3.26.39.188

C:\Users\ANBAZHAGAN>
```

It will success..

Latency routing

If your application is hosted in multiple AWS Regions, you can improve performance for your users by serving their requests from the AWS Region that provides the lowest latency.

Steps to create latency record

Step1: hosted zone(jayaseelan.online)---->create record--->value
(**server1 ip** copy and paste)----->TTL(time to leave)---->60 sec-----
>record type(A-routes traffic to an ipv4 address and some AWS resource)---->routing policy(latency routing)---->**region(asia pacific Mumbai)**----->create records

Route 53 > Hosted zones > jayaseelan.online > Create record

Create record [Info](#)

Quick create record [Switch to wizard](#)

▼ Record 1 [Delete](#)

Record name [Info](#)

subdomain jayaseelan.online

Record type [Info](#)

A – Routes traffic to an IPv4 address and some AWS resources

Alias

Value [Info](#)

13.55.121.73

Enter multiple values on separate lines.

TTL (seconds) [Info](#)

60 +1m 1h 1d

Recommended values: 60 to 172800 (two days)

Routing policy [Info](#)

Latency

Region

Asia Pacific (Mumbai)

Health check ID - optional [Info](#)

Choose health check

↻

Record ID [Info](#)

mumba

Step 1: hosted zone(jayaseelan.online)---->create record--->value (server2 ip copy and paste)----->TTL(time to leave)----->60 sec----->record type(A-routes traffic to an ipv4 addres and some aws resource)---->routing policy(latency routing)---->**region(asia pacific singapore)**----->create records

Route 53 > Hosted zones > jayaseelan.online > Create record

Create record [Info](#)

Quick create record [Switch to wizard](#)

▼ Record 1 [Delete](#)

Record name [Info](#)

subdomain jayaseelan.online

Record type [Info](#)

A – Routes traffic to an IPv4 address and some AWS resources

Alias

Value [Info](#)

3.26.39.188

Enter multiple values on separate lines.

TTL (seconds) [Info](#)

60 +1m 1h 1d

Recommended values: 60 to 172800 (two days)

Routing policy [Info](#)

Latency

Region

Asia Pacific (Singapore)

Health check ID - optional [Info](#)

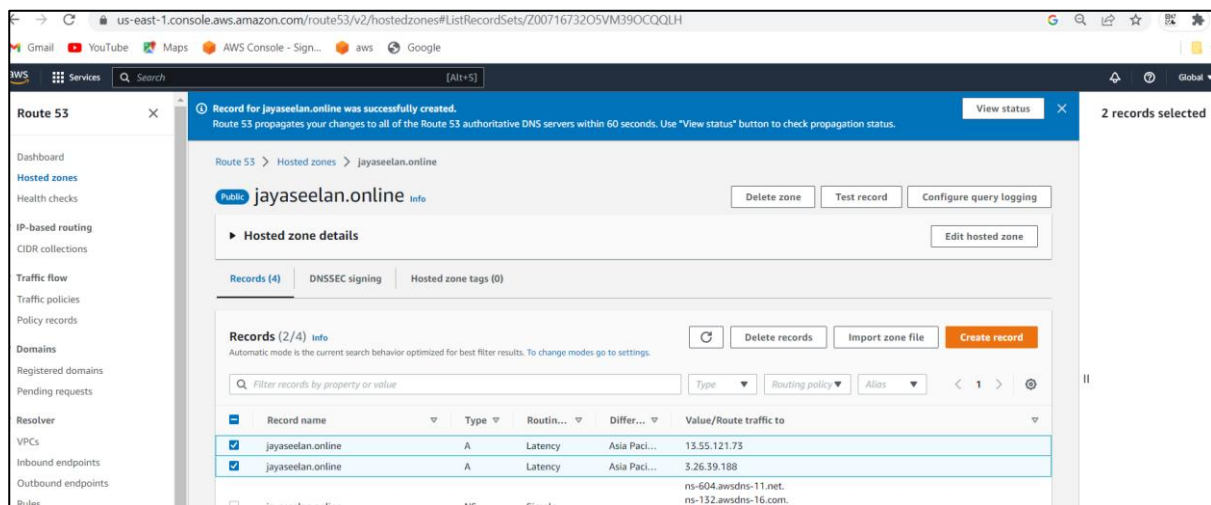
Choose health check

↻

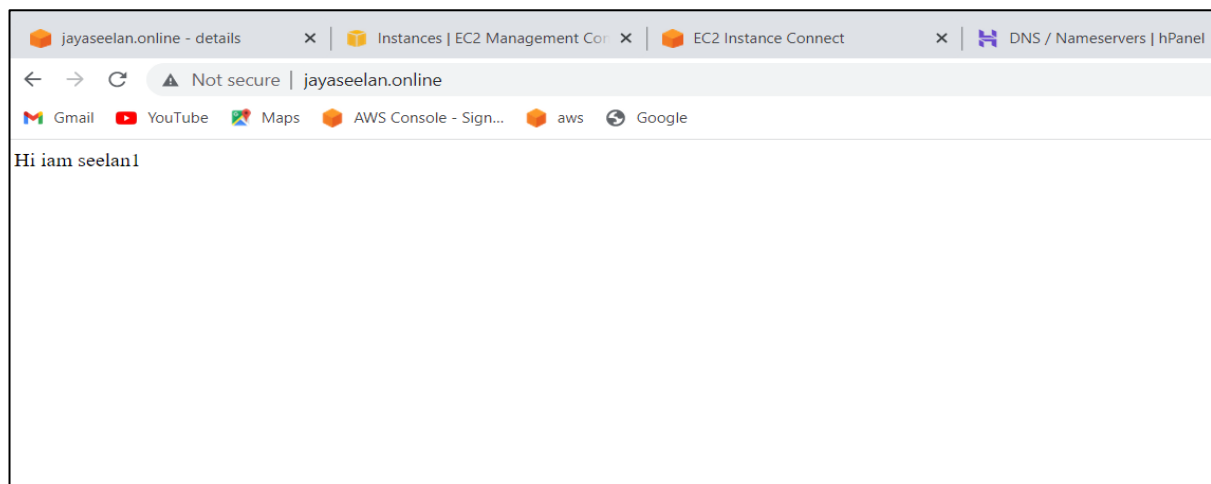
Record ID [Info](#)

singapore

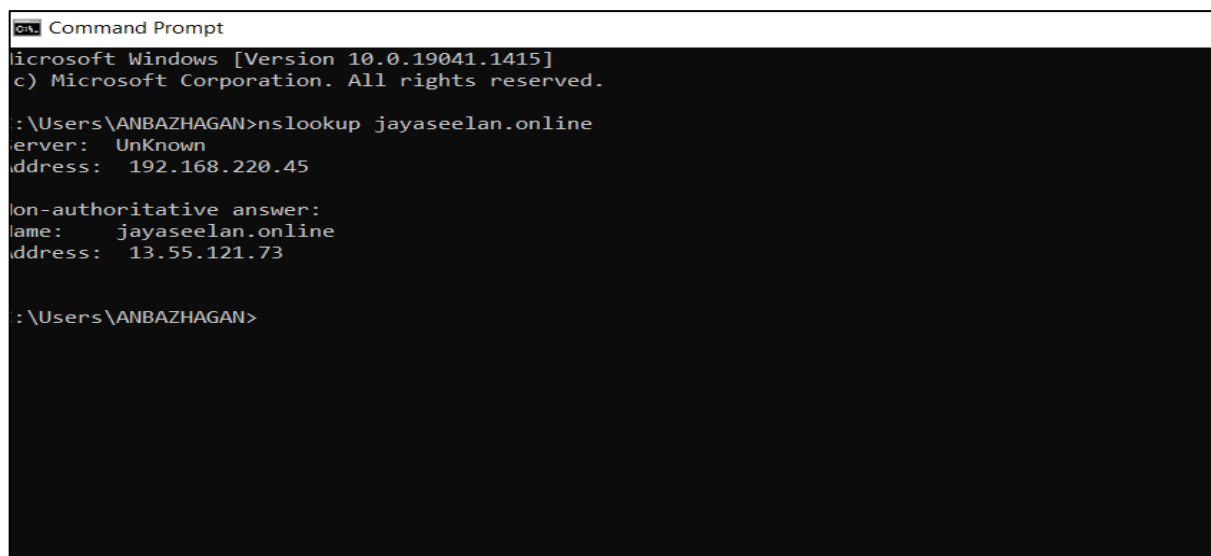
Created latency server1 and server2 record



Now put chrome text page <http://jayaseelan.online>----> it will show Mumbai region server



Now check using **cmd** prompt ---->nslookup jayaseelan.online--->it will show Mumbai region server ip(1st server ip shown)



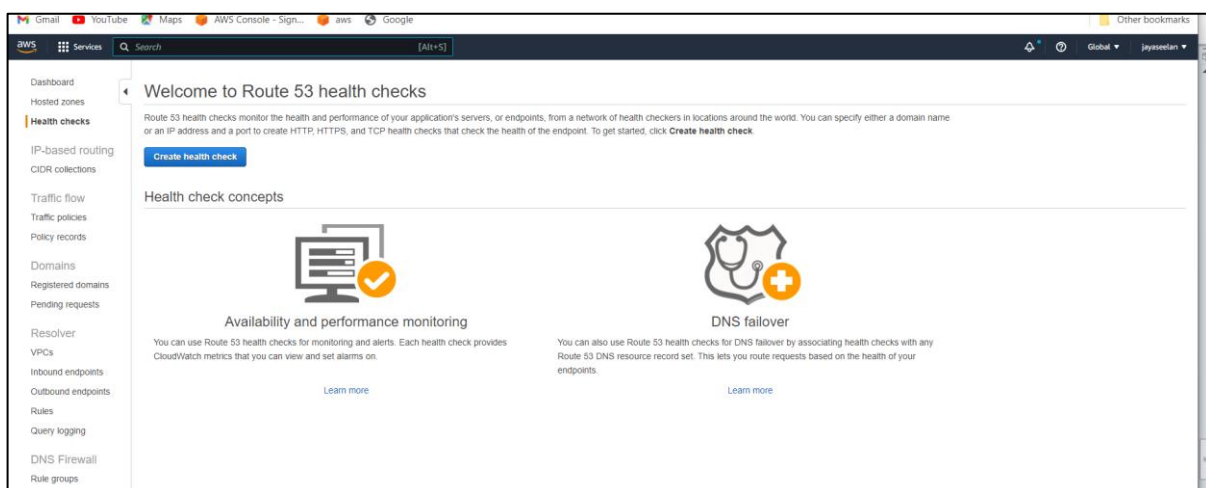
Failover routing:

Failover routing lets you route traffic to a resource when the resource is healthy or to a different resource when the first resource is unhealthy.

The primary and secondary records can route traffic to anything from an Amazon S3 bucket that is configured as a website to a complex tree of records.

Steps to create failover record

Step1:route-53----->health check---->create health check



Step1.1:name(healthy)--->ip address(server1 ip)---->host name(jayaseelan.online)---->path/(index.html)--->next--->create alarm(no)--->create health check.

Create health check

Step 1: Configure health check
Step 2: Get notified when health check fails

Configure health check

Route 53 health checks let you track the health status of your resources, such as web servers or mail servers, and take action when an outage occurs.

Name

healthy

What to monitor

☒ Endpoint
☐ Status of other health checks (calculated health check)
☐ State of CloudWatch alarm

Monitor an endpoint

Multiple Route 53 health checks will try to establish a TCP connection with the following resource to determine whether it's healthy.
[Learn more](#)

Specify endpoint by

☒ IP address
☐ Domain name

Protocol

HTTP

IP address *

13.55.121.73

Host name

jayaseelan.online

Port *

80

Path

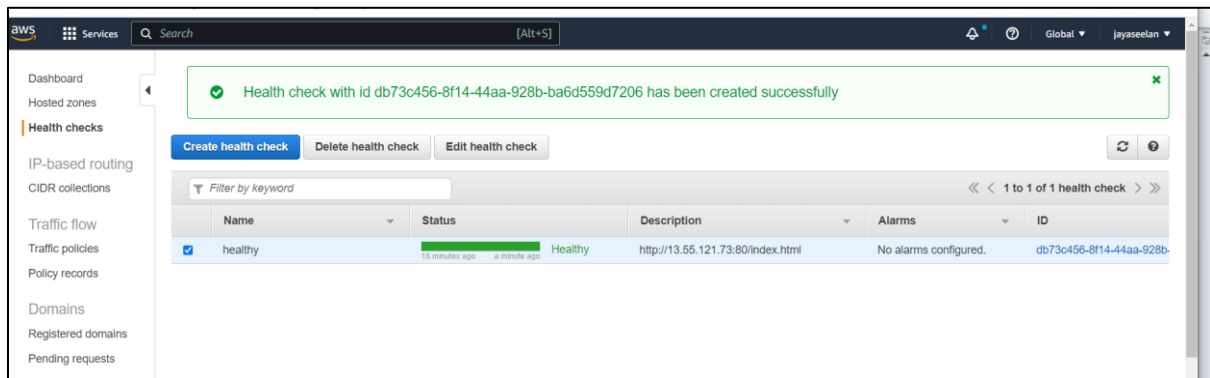
/index.html

Advanced configuration

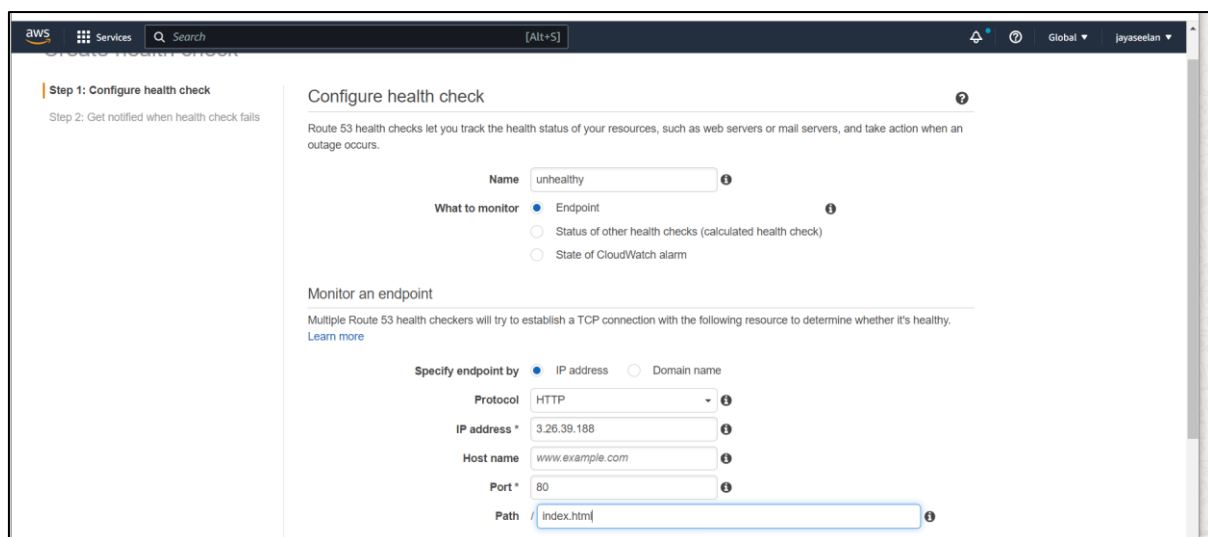
URL

http://13.55.121.73:80/index.html

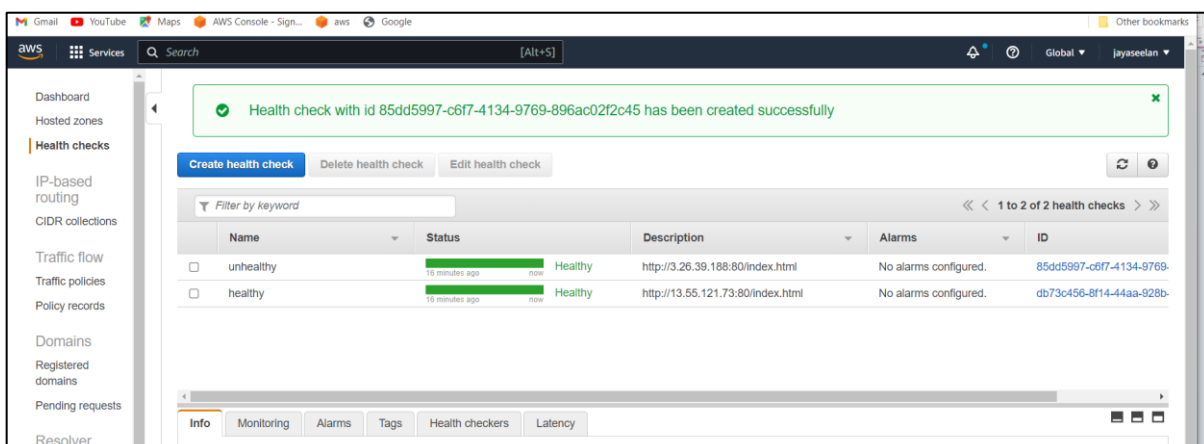
created healthy



Step 1.2: name(un healthy)--->ip address(server2 ip)---->host name(jayaseelan.online)---->path/(index.html)--->next--->create alarm(no)--->create health check



Created unhealthy



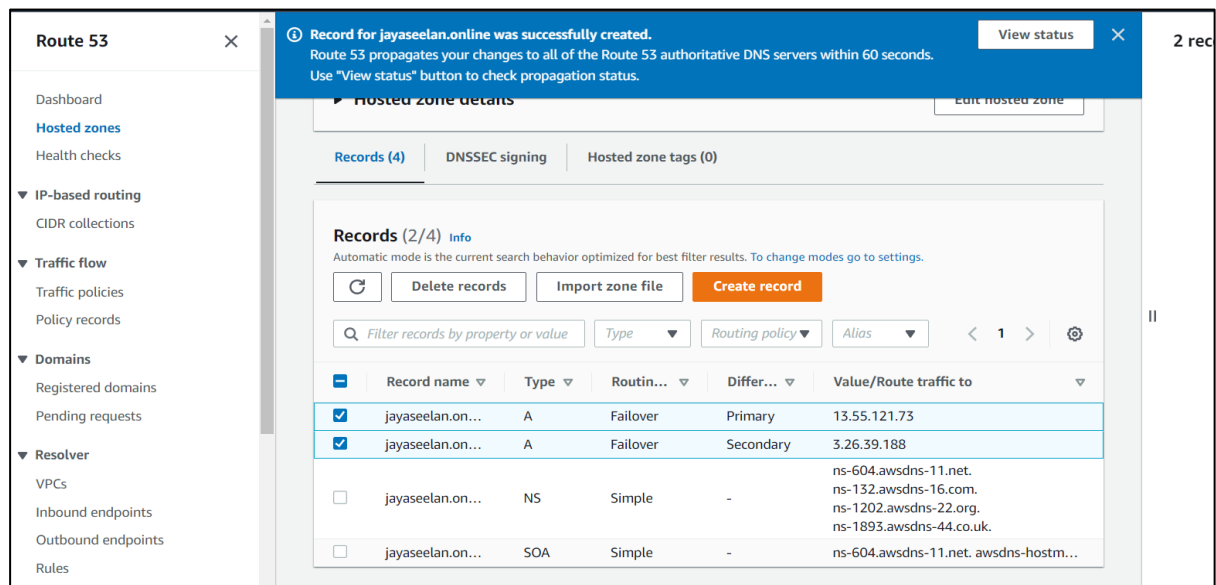
Step2: hosted zone(jayaseelan.online)---->create record--->value (**server1 ip** copy and paste)----->TTL(time to leave)---->60 sec---->record type(A-routes traffic to an ipv4 addres and some aws resourse)---->routing policy(failover routing)---->failover record type(primary)---->health check id(select healthy)----->create records

The screenshot shows the 'Quick create record' form in AWS Route 53. The form is titled 'Record 1' and includes a 'Delete' button. The 'Record name' field is set to 'subdomain' and the 'Record type' is 'A - Routes traffic to an IPv4 address and some AWS resources'. The 'Value' field contains the IP address '13.55.121.73'. The 'TTL (seconds)' is set to '60' and the 'Routing policy' is 'Failover'. The 'Failover record type' is set to 'Primary' and the 'Health check ID' is 'db73c456-8f14-44aa-928b-ba6d559d7206'. The 'Record ID' is also visible at the bottom.

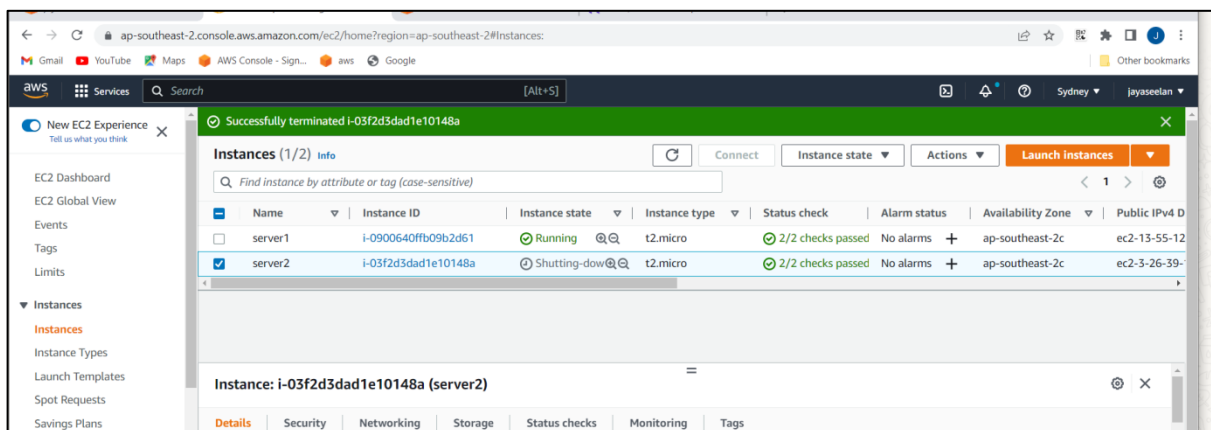
Step2.1: hosted zone(jayaseelan.online)---->create record--->value (**server2 ip** copy and paste)----->TTL(time to leave)---->60 sec---->record type(A-routes traffic to an ipv4 addres and some aws resourse)---->routing policy(failover routing)---->failover record type(secondary)---->health check id(select unhealthy)----->create records

The screenshot shows the 'Quick create record' form in AWS Route 53. The form is titled 'Record 1' and includes a 'Delete' button. The 'Record name' field is set to 'subdomain' and the 'Record type' is 'A - Routes traffic to an IPv4 address and some AWS resources'. The 'Value' field contains the IP address '3.26.39.188'. The 'TTL (seconds)' is set to '60' and the 'Routing policy' is 'Failover'. The 'Failover record type' is set to 'Secondary' and the 'Health check ID' is '85dd5997-c6f7-4134-9769-896ac02f2c45'. The 'Record ID' is also visible at the bottom.

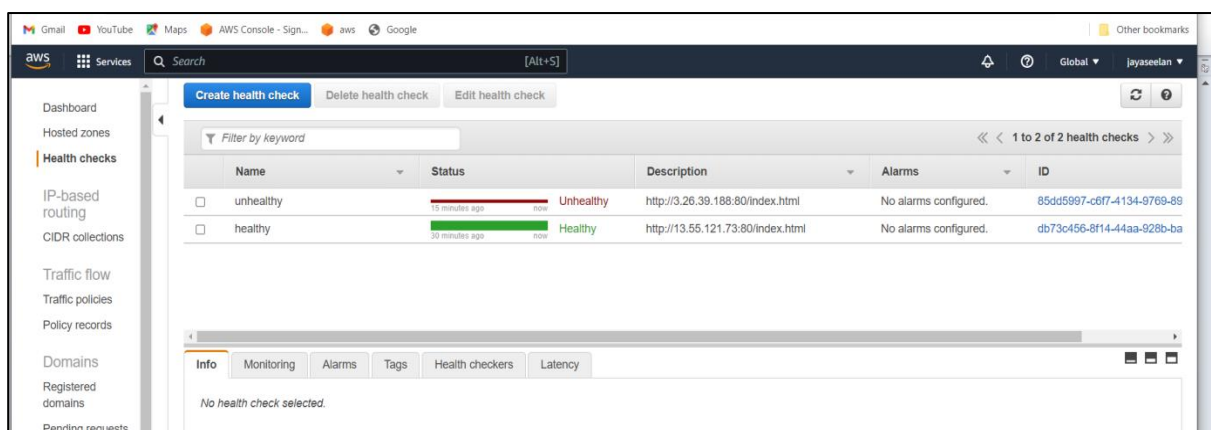
created record for healthy server1 and unhealthy server2



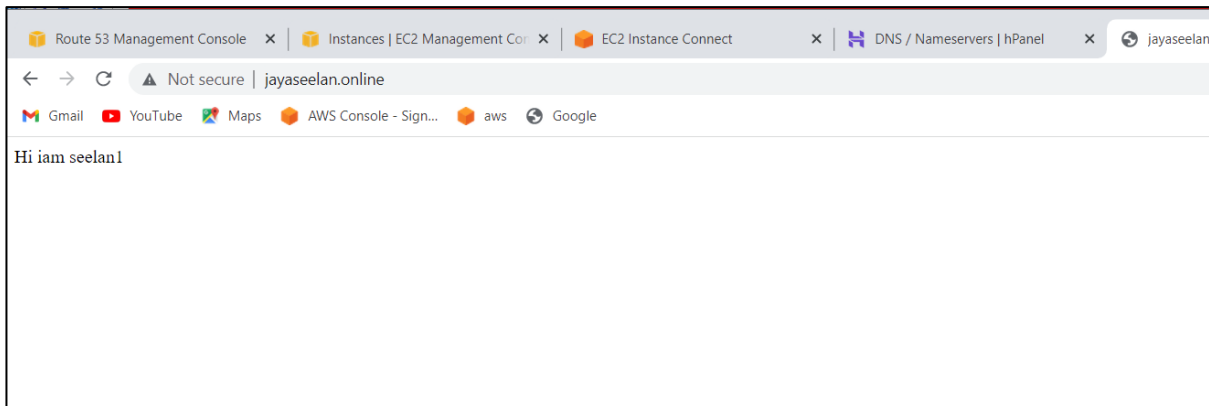
Step2.2:terminate server2



Now see health checks--->terminate server ip is unhealthy



Now put chrome text page <http://jayaseelan.online>----> it will show health record server content



Now check using **cmd** prompt ---->nslookup jayaseelan.online--->it will show healthy server ip

```
Command Prompt
Microsoft Windows [Version 10.0.19041.1415]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ANBAZHAGAN>nslookup jayaseelan.online
Server: UnKnown
Address: 192.168.220.45

Non-authoritative answer:
Name: jayaseelan.online
Address: 13.55.121.73

C:\Users\ANBAZHAGAN>
```