Module 4: Route 53 Assignment

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Problem Statement:

You work for XYZ Corporation which uses on-premise solutions and a limited number of systems. With the increase in requests in their application, the load also increases. So, to handle the load the corporation has to buy more systems almost on a regular basis. Realizing the need to cut down on the expenses of systems, they decided to move their infrastructure to AWS.

Tasks To Be Performed:

1. Use the Route 53 hosted zone created in the assignment.
2. Route the traffic to an EC2 instance with an Apache web server running init using its IP address.

Solution

Route53- It is the highly available and scalable Domain Name System (DNS), and since we know that DNS uses port no 53 that's why it is called Route53. DNS is an internet service that translates domain names into addresses. It maps the domain name to the IP address.

So, there are a few things like Root Server, which will basically have the information about the Top Level Domain, it will have the information about what logs have been produced or who is using what sort of Top level domain, all of this information is there in Root Level server. Top Level Domain server keeps the information about authoritative name servers, so the name server contains the information about the IP addresses for individual domains. Name servers are like availability zones if one Name server goes down then another NS manages all the things.

An authoritative name server is the server component in DNS that holds actual DNS records such as A name, C name, Alias, etc. A name maps the domain name to the IP address of the backend host. C name maps one name to another name instead of an IP address. Alias name is similar to the C name with a little difference, let us say a particular domain name like 'apple.com', but you don't want that 'apple.com' to be visible to the world, so you give an Alias name to that like 'abc.com' and whoever is typing this 'abc.com' will redirect to 'apple.com'.

In this Assignment, we have to create a hosted zone and route the traffic to an EC2 instance with an apache2 web server installed on it using an IP address as well as to an Application Load Balancer. For this, we will need a domain name and Route53, we can use fee as well as paid domains from Freenom or GoDaddy etc.

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Steps to create hosted zones

Go to Route53→ Create hosted zone→ Put the Domain name (without any space)→Select the type which is applicable (Public Hosted zone, web servers are always in the public domain)→ Create hosted zones.

Now hosted zone is created and along with this we got the name Servers and SOS, click on the name server we will see four NS.

Now go to the website from where we getting the domain name (GoDaddy.com), select the domain name, and then click on Manage DNS, now add/replace the NS with the NS that we got after the creation of the hosted zone (don't copy the dot).

Now we will have to route the traffic to an instance, for that we need to create a record. Click on Create Record→ Record name→ Paste the IP address(public) of the instance in the 'value' section→ Routing policy (simple routing)→ Create record. Copy the DNS name from the record and paste it into the web browser, you will see the content of the web page installed on that instance.

Now again for directing our traffic to the load balancer we need to create another record. Create record→put the subdomain name → since we route the traffic to the load balancer so click on the Alias, it will ask for the endpoint, and the endpoint will be 'Alias to Application/classic load balancer' so select this→choose region→ choose the load balancer→Create record. Now select the record then copy the record value and paste it on the web browser, you will see the contents present in the web server.

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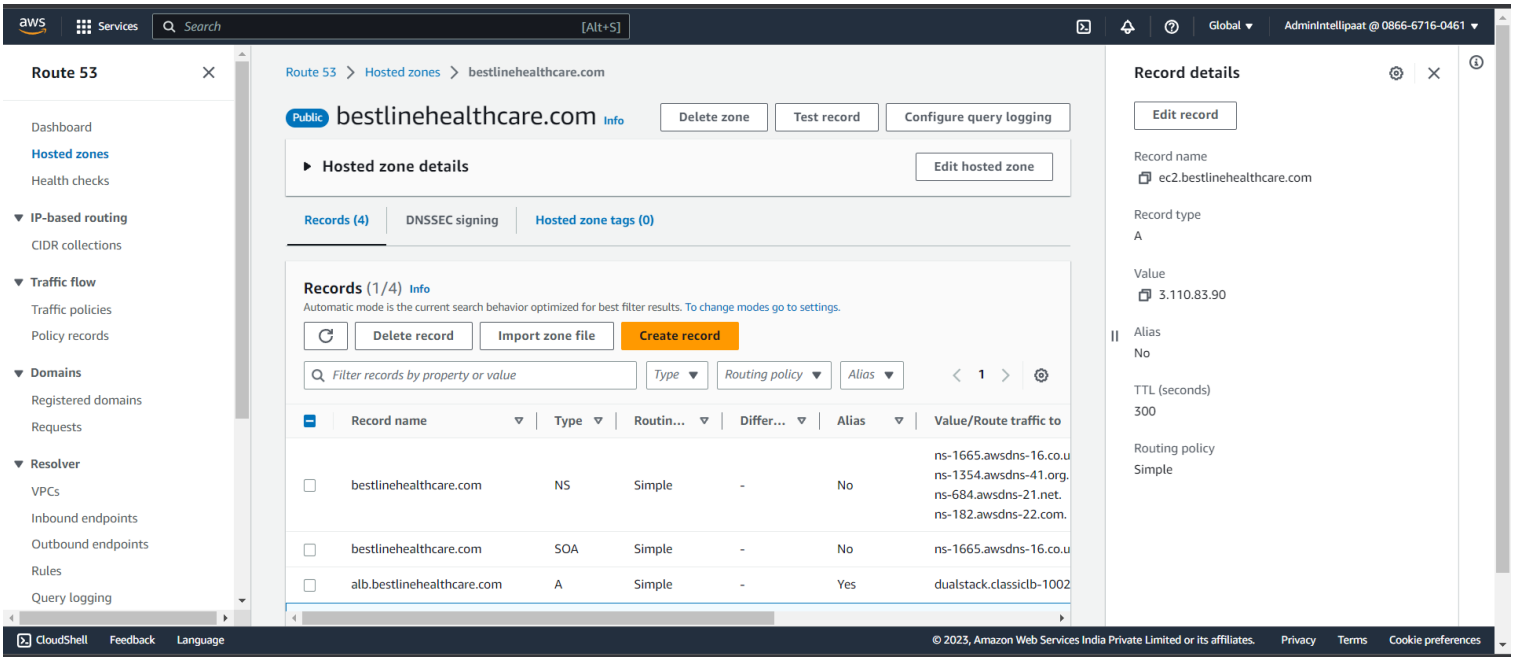
RESULTS


Route 53
Dashboard
Hosted zones
Health checks
IP-based routing
CIDR collections
Traffic flow
Traffic policies
Policy records
Domains
Registered domains
Requests
Resolver
VPCs
Inbound endpoints
Outbound endpoints
Rules
Query logging
Route 53 > Hosted zones > bestlinehealthcare.com
Public bestlinehealthcare.com Info
Delete zone
Test record
Configure query logging
Hosted zone details
Edit hosted zone
Records (4)
DNSSEC signing
Hosted zone tags (0)
Records (1/4) Info
Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.
Delete record
Import zone file
Create record
Filter records by property or value
Type
Routing policy
Alias
Record name
Type
Routin...
Differ...
Alias
Value/Route traffic to
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bestlinehealthcare.com SOA Simple - No ns-1665.awsdns-16.co.u
alb.bestlinehealthcare.com A Simple - Yes dualstack.classiclb-1002
Record details
Edit record
Record name
ec2.bestlinehealthcare.com
Record type
A
Value
3.110.83.90
Alias
No
TTL (seconds)
300
Routing policy
Simple
CloudShell
Feedback
Language
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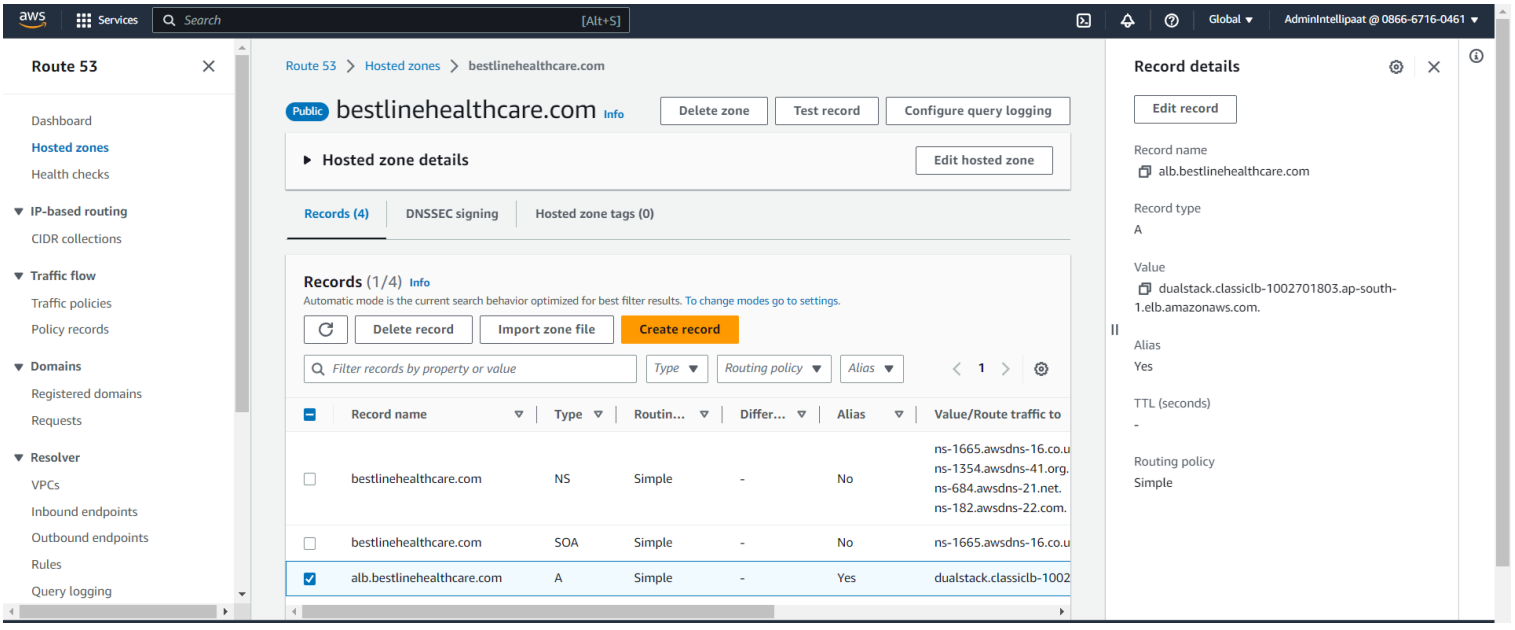
Privacy
Terms
Cookie preferences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