

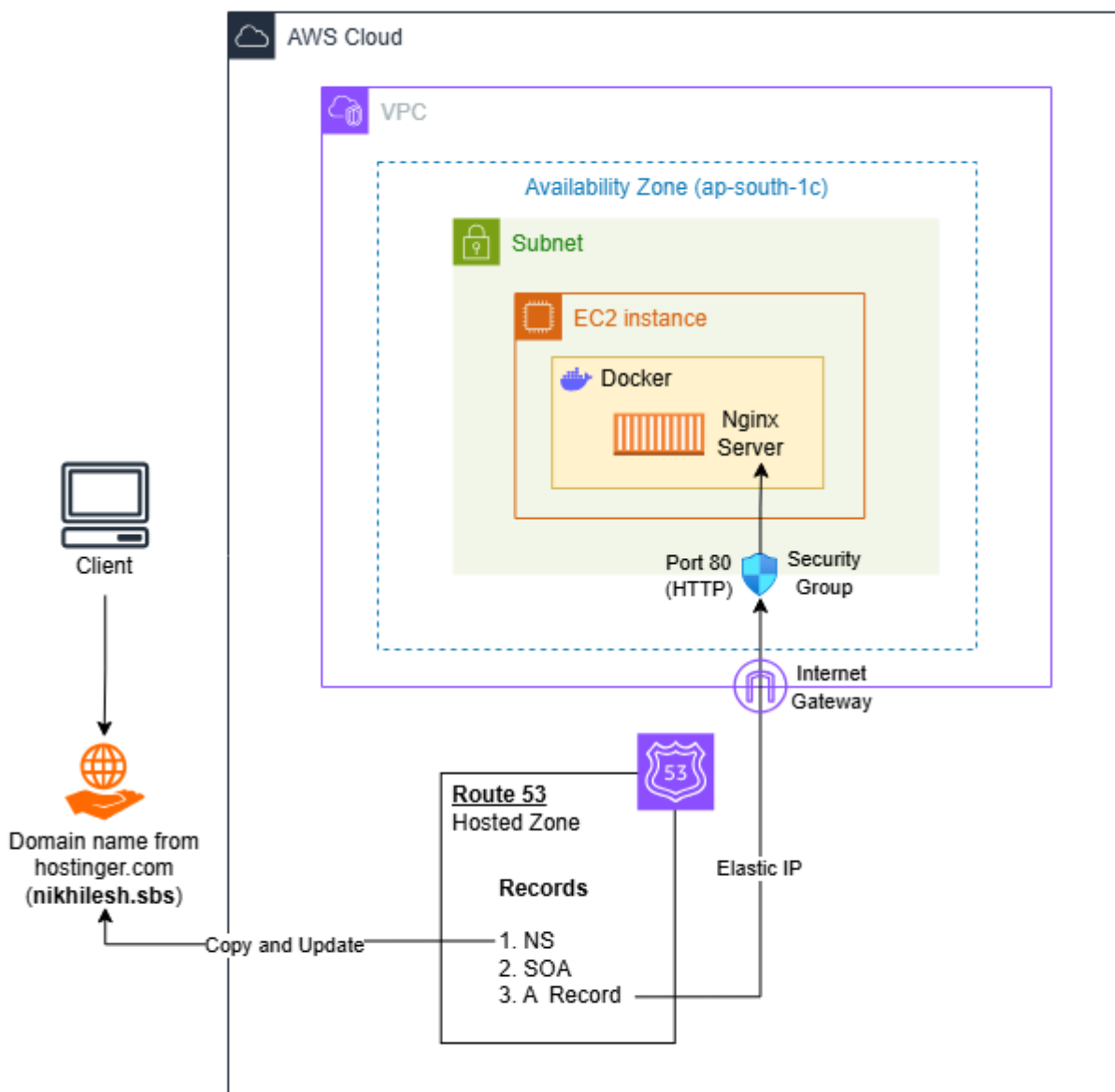
# TASK 4 – Application Access

**Requirements:** Access app via Elastic IP or EC2 Public IP or Route 53 domain.

## **Prerequisites:**

- Domain registered in Hostinger.com (**nikhilesh.sbs**).
- Running EC2 instance in AWS (Region: ap-south-1 / Mumbai as shown).
- Nginx available on the instance (in this task, via Docker).

## **Architecture:**

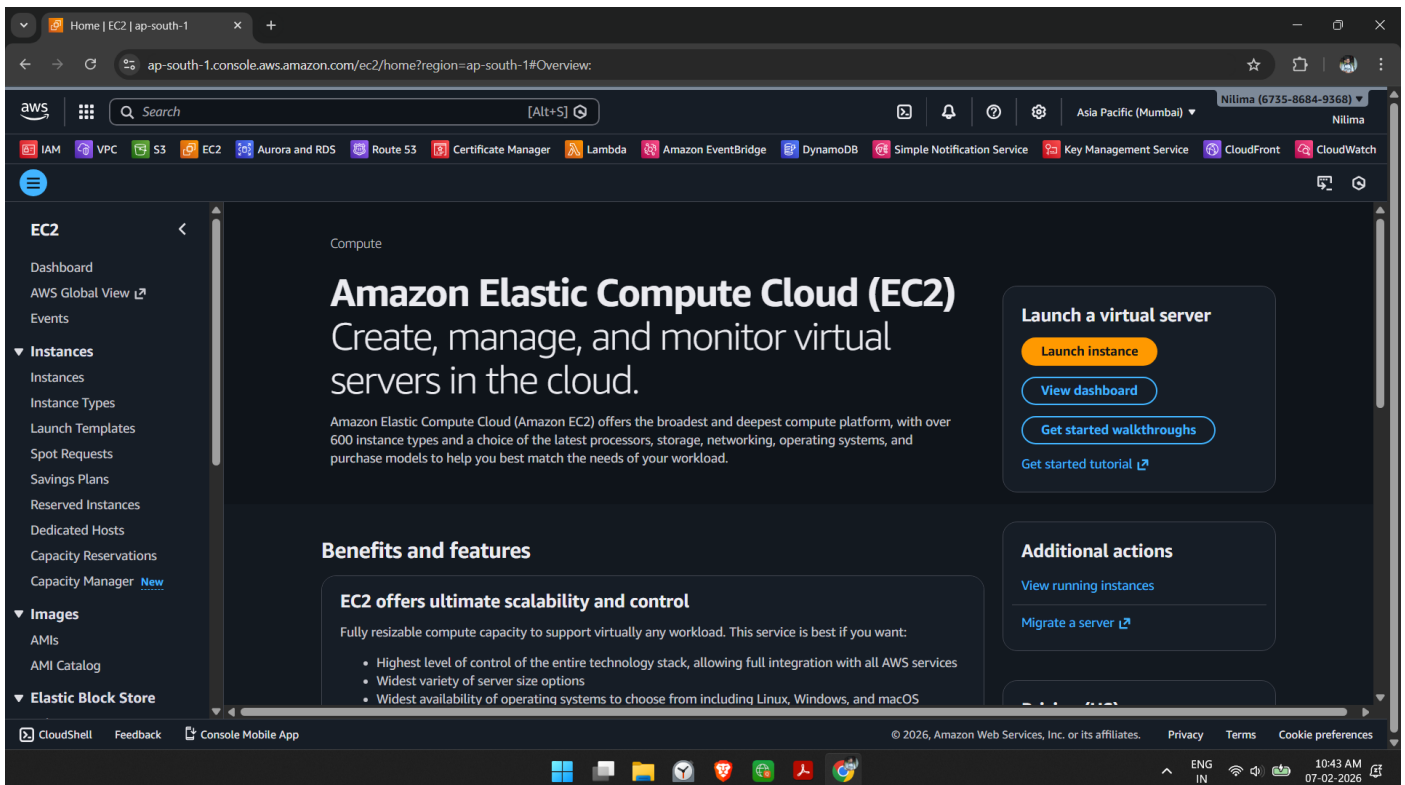
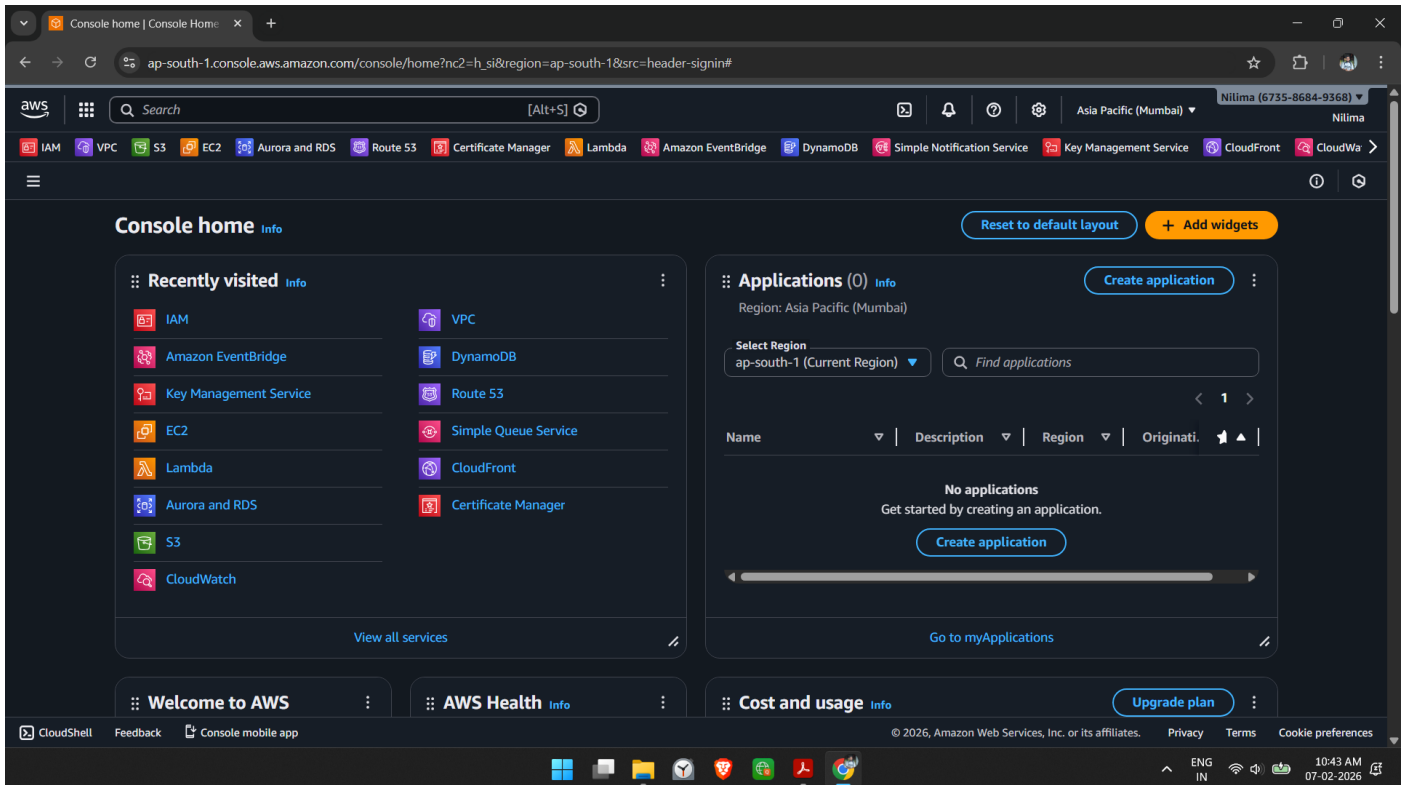


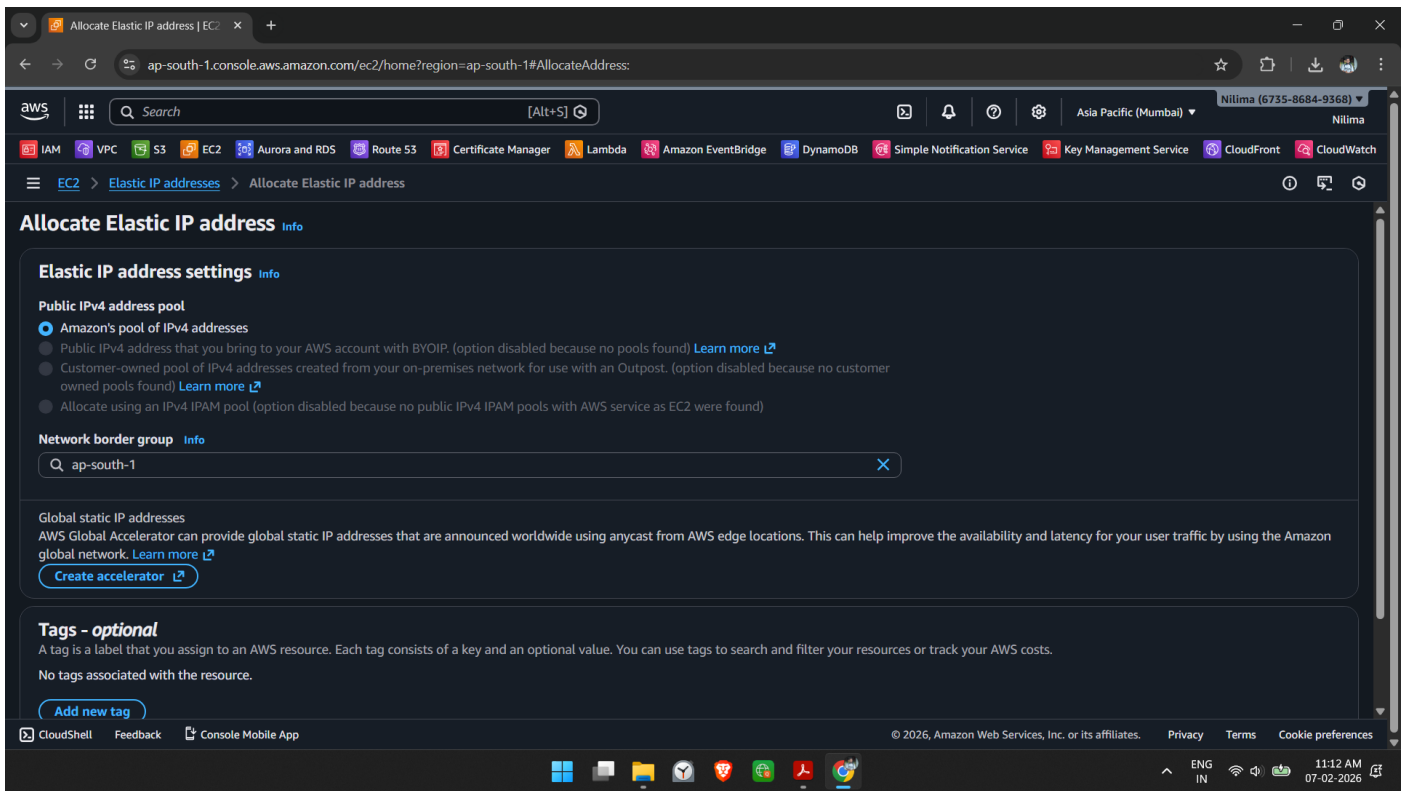
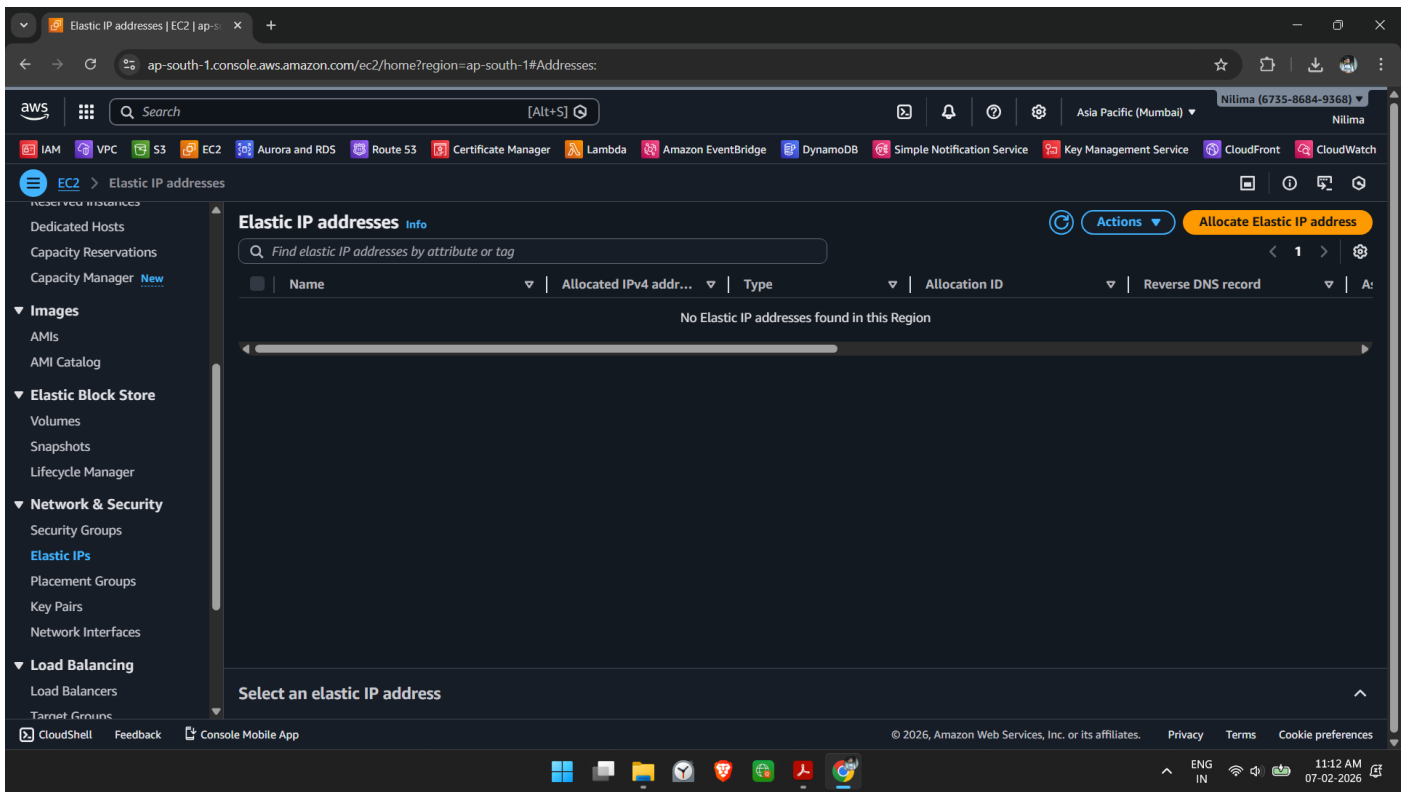
- Client accesses **nikhilesh.sbs** from a browser.
- DNS is hosted in Route 53 (Public Hosted Zone) with NS/SOA and an A record.
- The A record points to the EC2 instance's Elastic IP, so traffic reaches the instance over the Internet Gateway and security group on HTTP (port 80).
- Nginx is running on the EC2 instance (inside Docker) and serves the default "Welcome to nginx!" page.

# Step-by-step procedure:

## I) Allocate an Elastic IP (static public IP)

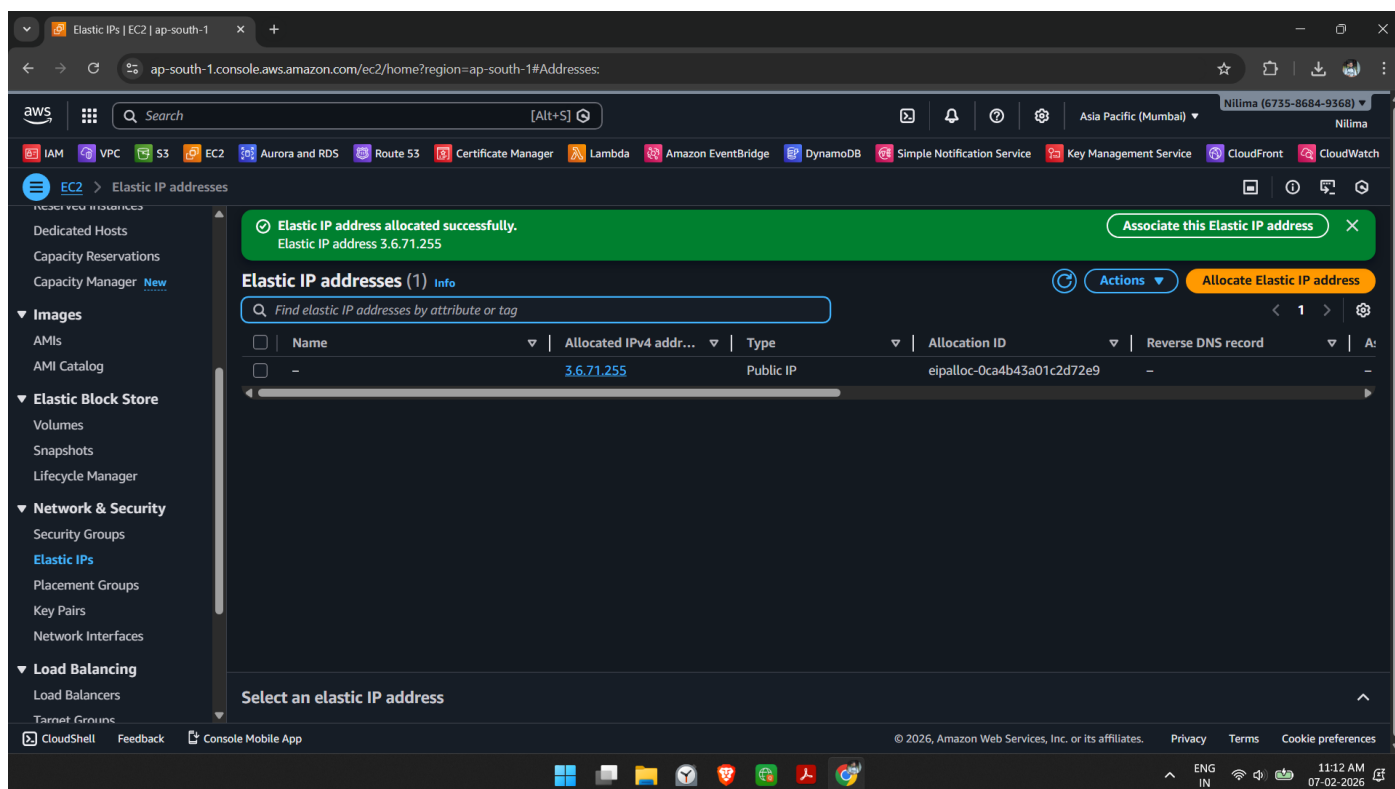
1. Open EC2 → Elastic IPs and choose Allocate Elastic IP address.



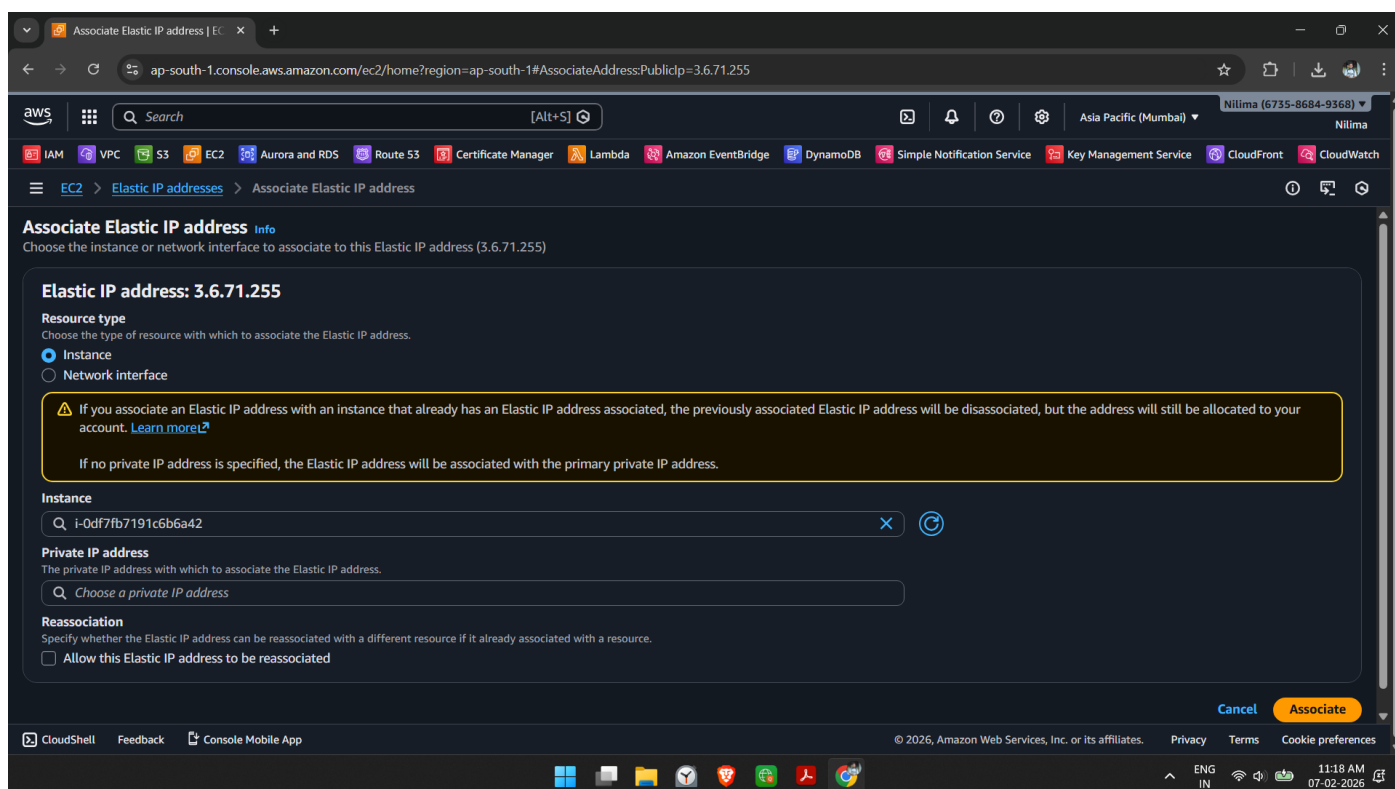


After allocation, the Elastic IP 3 . 6 . 71 . 255 appears in the Elastic IP list.

2. Select the allocated Elastic IP and choose Associate this Elastic IP address.



3. In the association screen, select Resource type: Instance and pick your running instance (shown selected), then choose Associate.



4. Verify in EC2 → Instances that the instance now shows Public IPv4 address: 3.6.71.255.

The screenshot shows the AWS Management Console for the 'ap-south-1' region. The 'Instances' page is active, displaying a list of EC2 instances. One instance, named 'docker' with ID 'i-0df7fb7191c6b6a42', is in the 'Running' state. The public IPv4 address is listed as 3.6.71.255. The instance is a 't3.micro' type and is located in the 'ap-south-1c' availability zone. The 'Details' tab for this instance is expanded, showing the instance summary, including the public IPv4 address, private IPv4 addresses, and the instance state.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DN
docker	i-0280a02887f217165	Terminated	t3.micro	-	View alarms +	ap-south-1c	-
docker	i-0df7fb7191c6b6a42	Running	t3.micro	Initializing	View alarms +	ap-south-1c	-

**i-0df7fb7191c6b6a42 (docker)**

**Details** | Status and alarms | Monitoring | Security | Networking | Storage | Tags

**Instance summary**

Instance ID: i-0df7fb7191c6b6a42

Public IPv4 address: 3.6.71.255 | open address

Private IPv4 addresses: 172.31.44.186

Instance state: Running

Public DNS: -

Private IP DNS name (IPv4 only): i-172-31-44-186.ap-south-1.compute.internal

## II) Create a Route 53 Public Hosted Zone

5. Open Route 53 → Hosted zones → Create hosted zone.

The screenshot shows the AWS Management Console for the 'ap-south-1' region. The 'Route 53' page is active, displaying the 'Hosted zones' section. The page features the 'Amazon Route 53' logo and a 'Get started with Route 53' button. The page also includes a 'Pricing (US)' section and a 'More resources' section with links to 'Documentation', 'API reference', and 'FAQs'.

**Amazon Route 53**

A reliable way to route users to internet applications

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

**Get started with Route 53**

Get started by registering a domain, configuring DNS, or using another Route 53 feature.

**Get started**

**Pricing (US)**

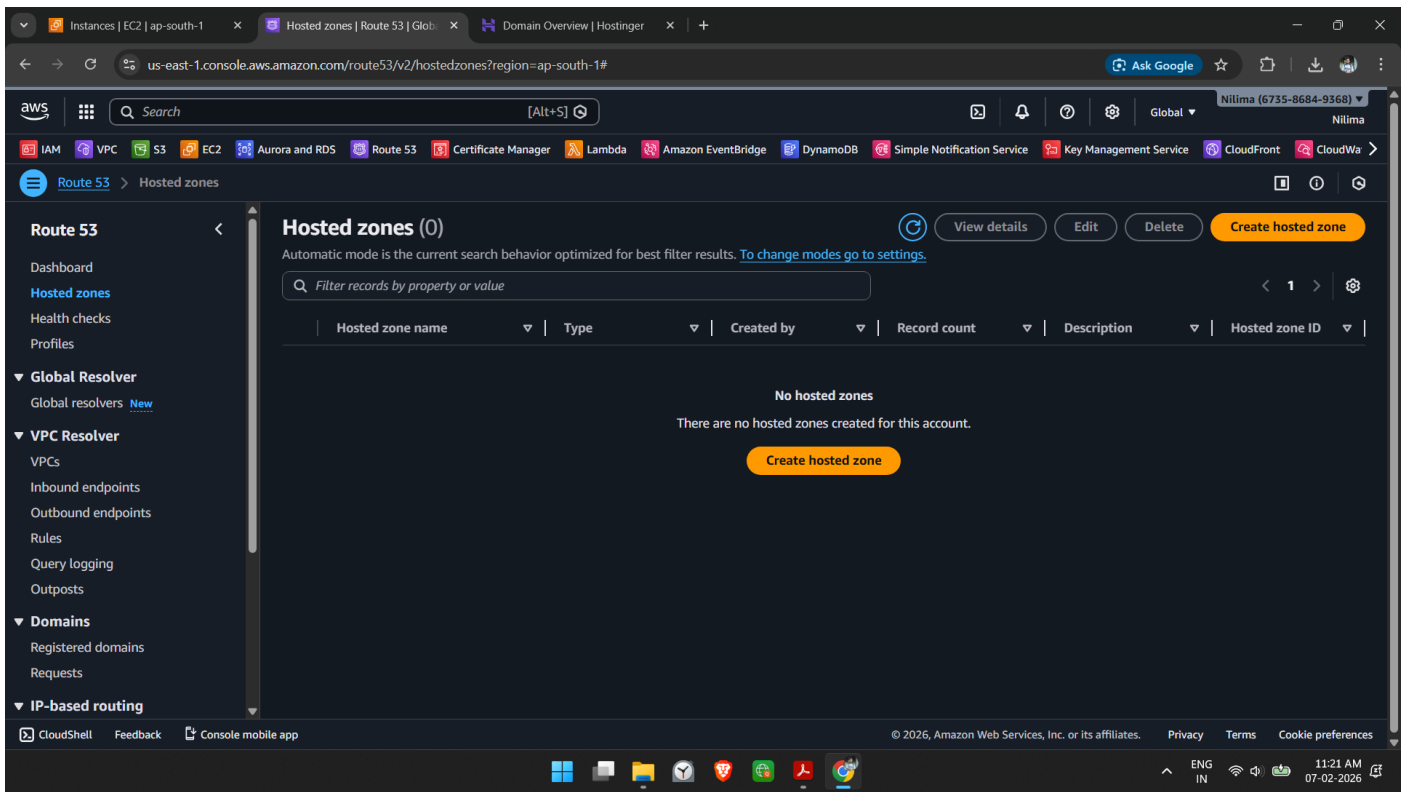
[View pricing](#)

**More resources**

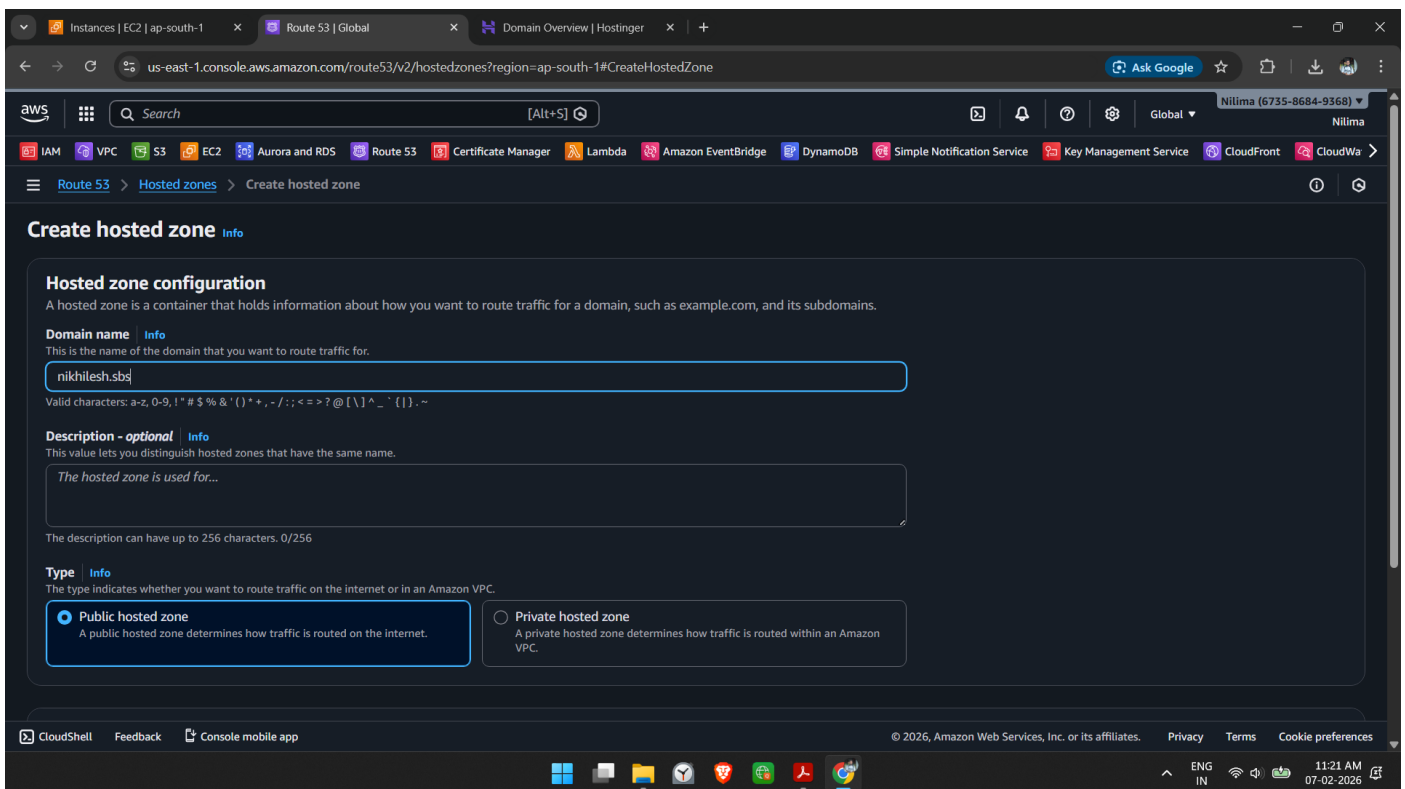
[Documentation](#)

[API reference](#)

[FAQs](#)



6. Enter the domain name **nikhilesh.sbs** and select Public hosted zone, then create it.



After creation, Route 53 shows default NS and SOA records in the hosted zone.

(Reference: AWS describes a public hosted zone as the container for routing internet DNS for a domain/subdomains, created from the Route 53 console by choosing “Create hosted zone” and selecting “Public hosted zone”.)

7. In the hosted zone for `nikhilesh.sbs`, choose Create record.

us-east-1.console.aws.amazon.com/route53/v2/hostedzones?region=ap-south-1#ListRecordSets/Z07759505TKBHXX61O7G

Route 53 > Hosted zones > nikhilesh.sbs

**Route 53**

- Dashboard
- Hosted zones
- Health checks
- Profiles

▼ **Global Resolver**

- Global resolvers [New](#)

▼ **VPC Resolver**

- VPCs
- Inbound endpoints
- Outbound endpoints
- Rules
- Query logging
- Outposts

▼ **Domains**

- Registered domains
- Requests

▼ **IP-based routing**

**Hosted zone details** [Edit hosted zone](#)

**Records (2)** [Accelerated recovery](#) [DNSSEC signing](#) [Hosted zone tags \(0\)](#)

**Records (2)** [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.](#)

[Type](#) [Routing p...](#) [Alias](#) < 1 > [Settings](#)

<input type="checkbox"/>	Record name	Type	Routin...	Differ...	Alias	Value/Route traffic to	TTL (s...	Health ...	Evalua...
<input type="checkbox"/>	nikhilesh.sbs	NS	Simple	-	No	ns-2018.awsdns-60.co.uk. ns-634.awsdns-15.net. ns-308.awsdns-38.com. ns-1121.awsdns-12.org.	172800	-	-
<input type="checkbox"/>	nikhilesh.sbs	SOA	Simple	-	No	ns-2018.awsdns-60.co.uk. a...	900	-	-

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8. Choose record type A and set the Value to the Elastic IP `3.6.71.255`, with TTL `300`, then create the record.

us-east-1.console.aws.amazon.com/route53/v2/hostedzones?region=ap-south-1#CreateRecordSet/Z07759505TKBHXX61O7G

Route 53 > Hosted zones > nikhilesh.sbs > Create record

▼ **Record 1** [Delete](#)

**Record name** [Info](#)  nikhilesh.sbs

Keep blank to create a record for the root domain.

☐ **Alias**

**Value** [Info](#)

Enter multiple values on separate lines.

**TTL (seconds)** [Info](#)  [1m](#) [1h](#) [1d](#) Recommended values: 60 to 172800 (two days)

**Record type** [Info](#) [A - Routes traffic to an IPv4 address and some AWS resources](#)

**Routing policy** [Info](#) [Simple routing](#)

[Add another record](#)

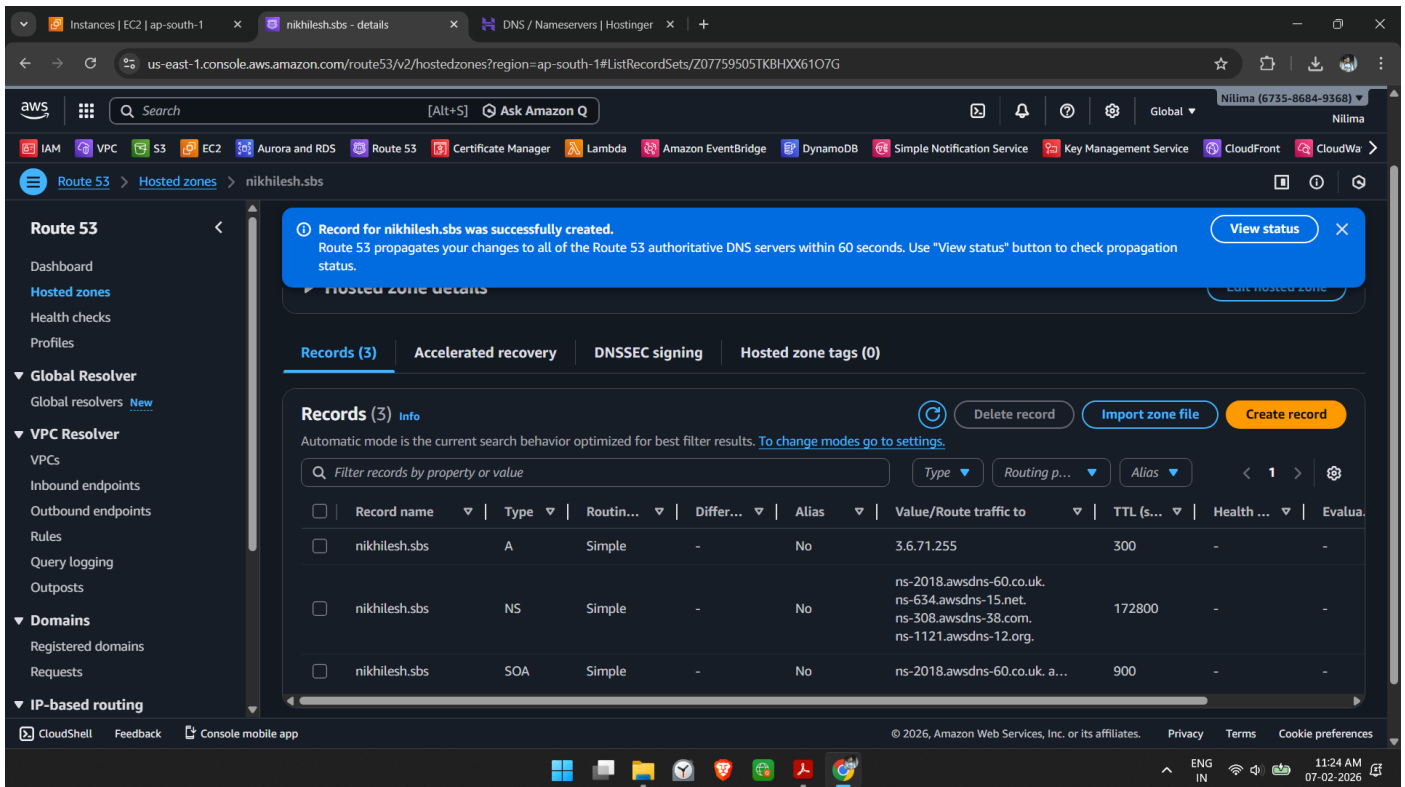
[Cancel](#) [Create records](#)

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## 9. Confirm the hosted zone now contains 3 records: A, NS, and SOA for `nikhilesh.sbs`.



Record for nikhilesh.sbs 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.

**Records (3)** | Accelerated recovery | DNSSEC signing | Hosted zone tags (0)

**Records (3) info**

Automatic mode is the current search behavior optimized for best filter results. [To change modes go to settings.](#)

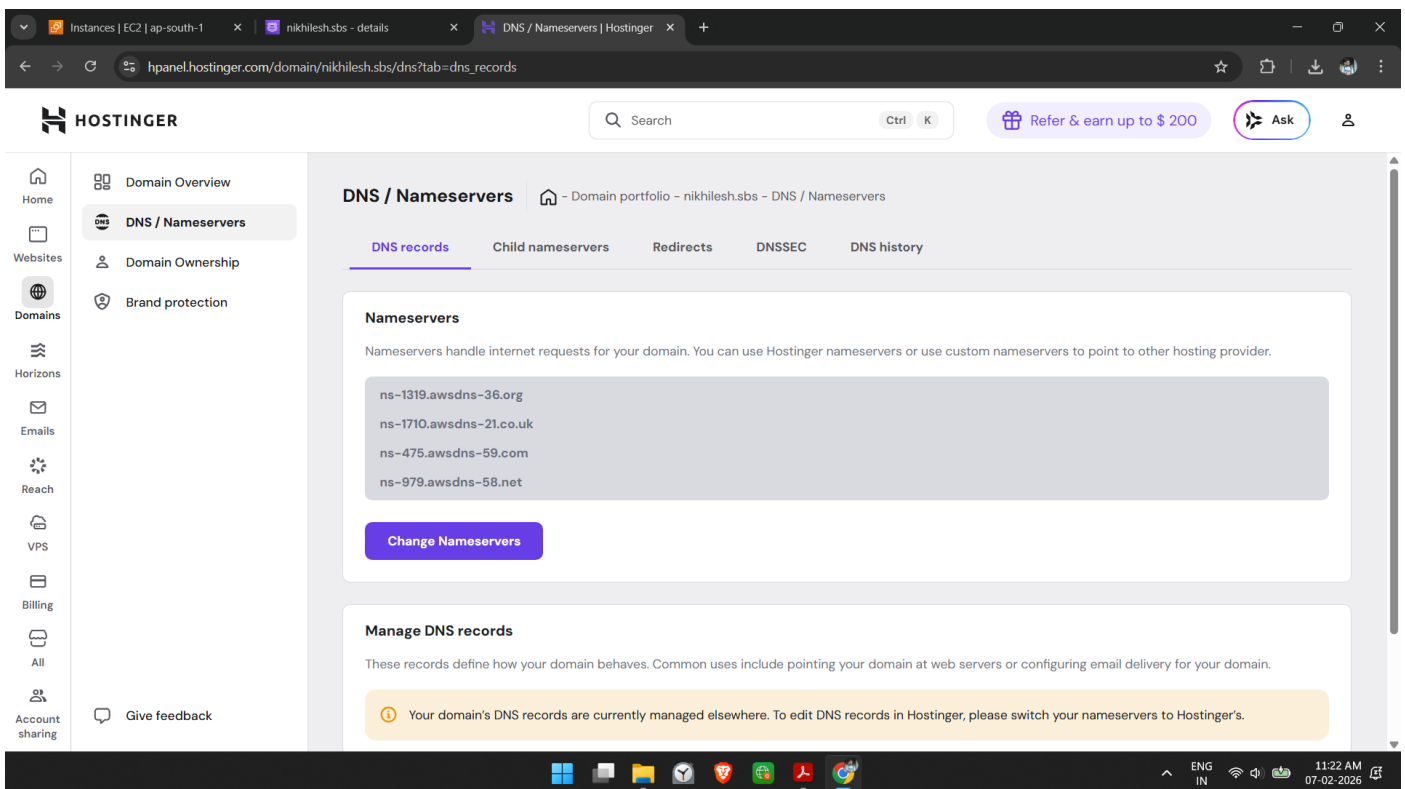
Filter records by property or value

	Record name	Type	Routin...	Differ...	Alias	Value/Route traffic to	TTL (s...	Health ...	Evalua...
<input type="checkbox"/>	nikhilesh.sbs	A	Simple	-	No	3.6.71.255	300	-	-
<input type="checkbox"/>	nikhilesh.sbs	NS	Simple	-	No	ns-2018.awsdns-60.co.uk. ns-634.awsdns-15.net. ns-308.awsdns-38.com. ns-1121.awsdns-12.org.	172800	-	-
<input type="checkbox"/>	nikhilesh.sbs	SOA	Simple	-	No	ns-2018.awsdns-60.co.uk. a...	900	-	-

## III) Update Hostinger nameservers to Route 53 nameservers

10. In Route 53 hosted zone details, copy the Route 53 NS values (example shown: `ns-2018.awsdns-60.co.uk`, `ns-634.awsdns-15.net`, `ns-308.awsdns-38.com`, `ns-1121.awsdns-12.org`).

In Hostinger DNS / Nameservers, choose Change nameservers and paste the Route 53 nameservers, then Save.



**HOSTINGER**

DNS / Nameservers

DNS records | Child nameservers | Redirects | DNSSEC | DNS history

**Nameservers**

Nameservers handle internet requests for your domain. You can use Hostinger nameservers or use custom nameservers to point to other hosting provider.

ns-1319.awsdns-36.org  
ns-1710.awsdns-21.co.uk  
ns-475.awsdns-59.com  
ns-979.awsdns-58.net

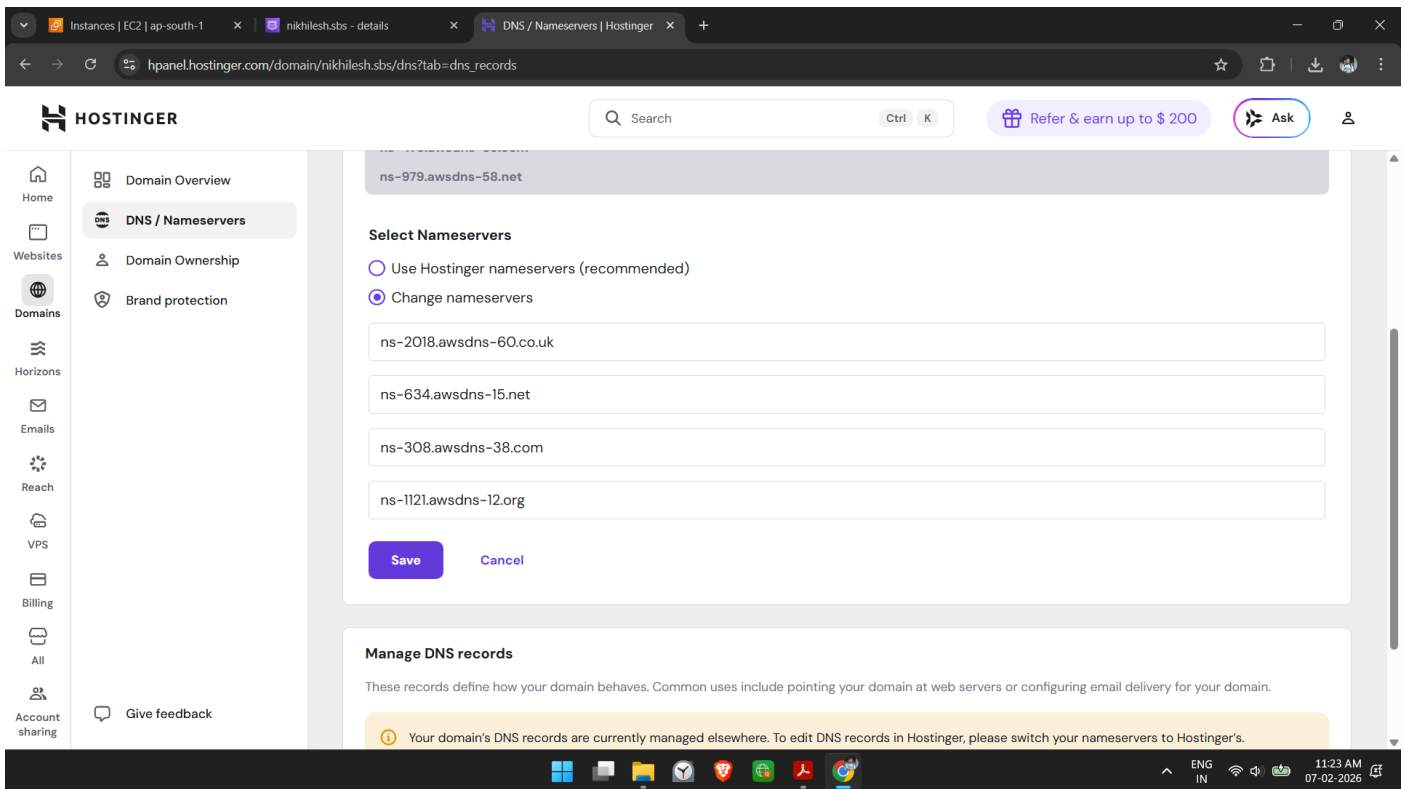
**Change Nameservers**

**Manage DNS records**

These records define how your domain behaves. Common uses include pointing your domain at web servers or configuring email delivery for your domain.

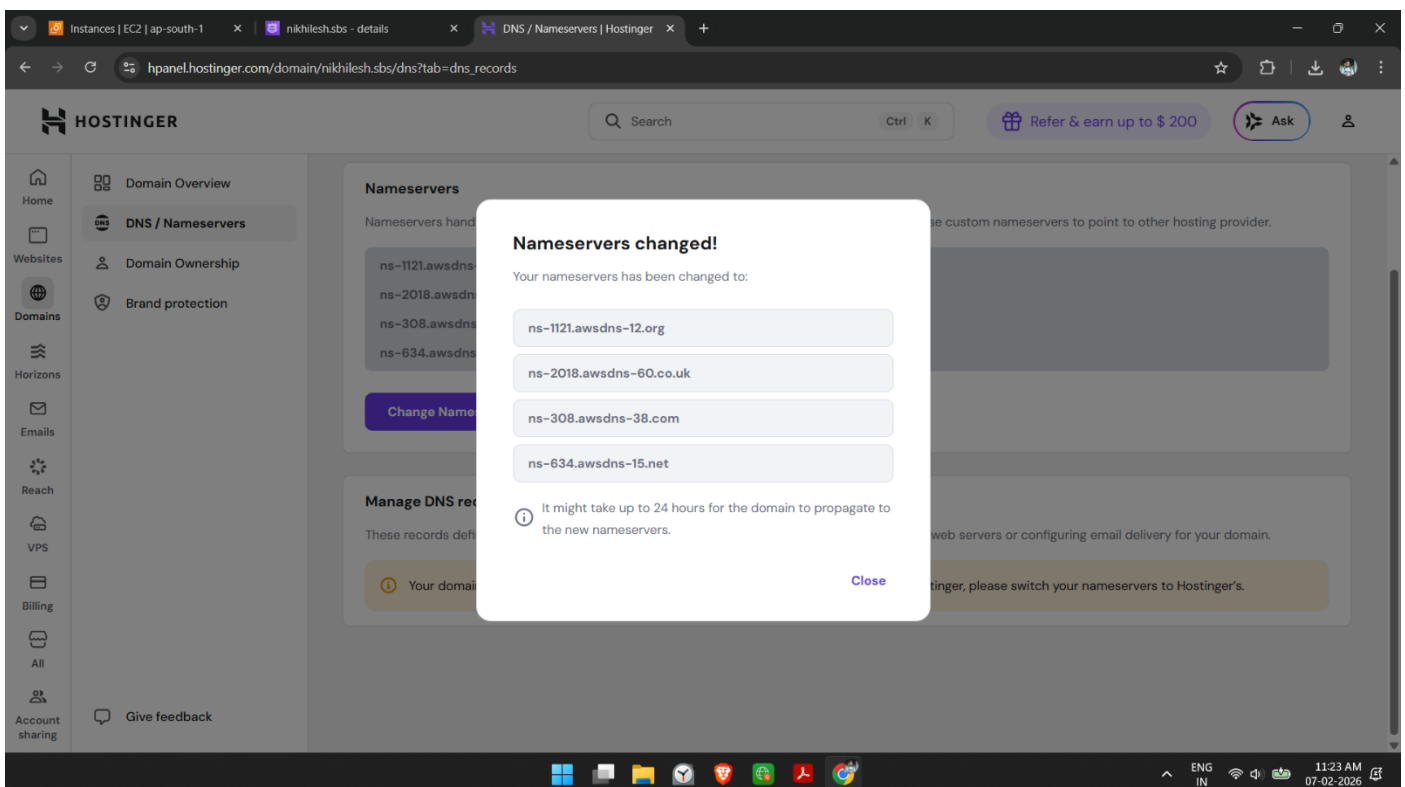
Your domain's DNS records are currently managed elsewhere. To edit DNS records in Hostinger, please switch your nameservers to Hostinger's.





Hostinger confirms Nameservers changed and indicates propagation may take up to 24 hours.

(Reference: AWS notes that to make Route 53 the DNS service for a domain registered with another registrar, you create the hosted zone and then update the domain's name servers at the registrar to the Route 53 name servers.)



11. Open a browser and go to <http://nikhilesh.sbs>.

Successful validation is shown by the “Welcome to nginx!” page loading from the EC2-hosted Nginx server.

