

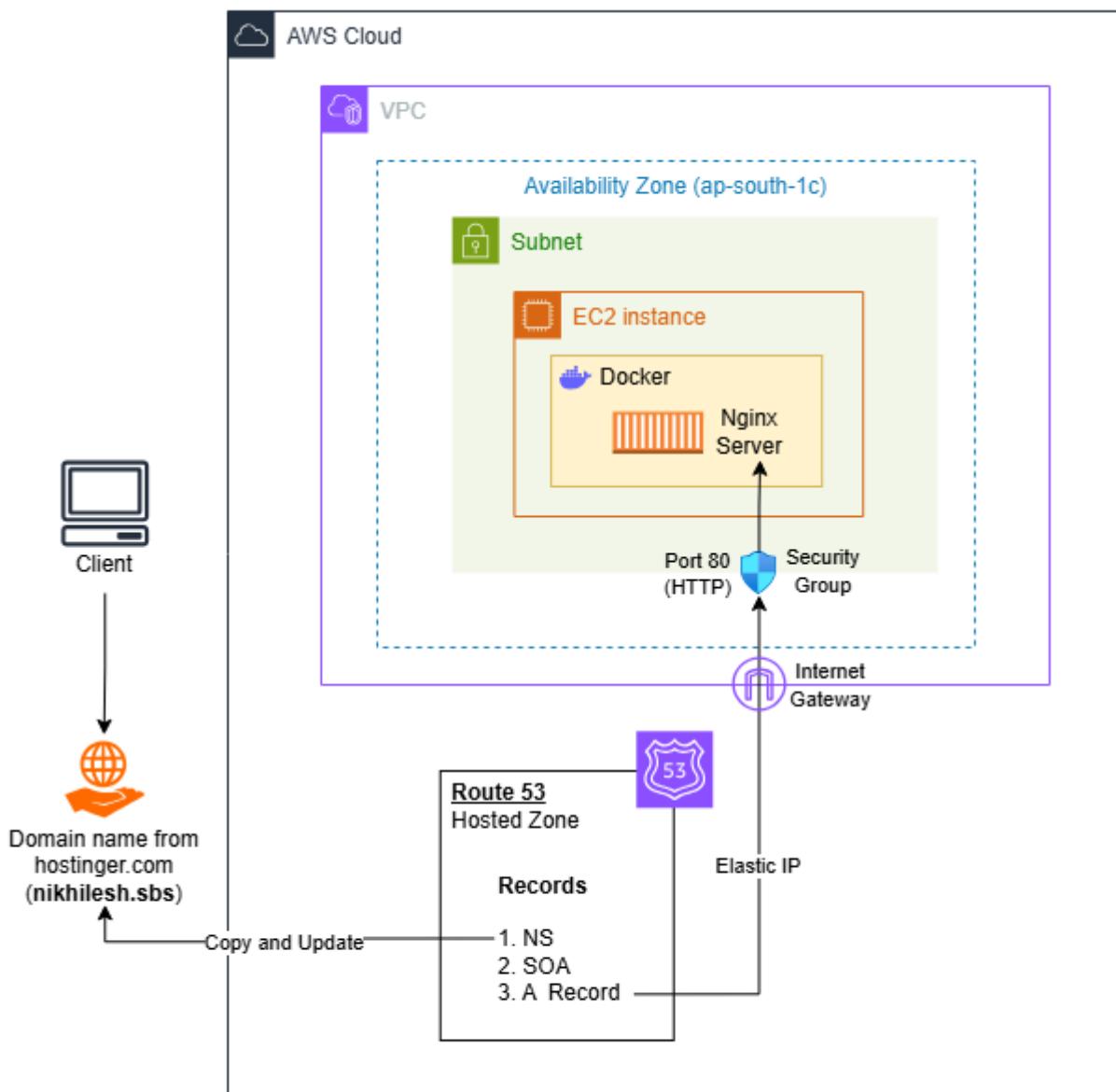
TASK 4 – Application Access

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.

The screenshot shows the AWS Console home page. On the left, there's a sidebar with 'Recently visited' services: IAM, VPC, Amazon EventBridge, Key Management Service, EC2, Lambda, Aurora and RDS, S3, and CloudWatch. Below this is a 'View all services' link. To the right, there's a section titled 'Applications (0)' with a 'Create application' button. A 'Select Region' dropdown is set to 'ap-south-1 (Current Region)'. A search bar says 'Find applications'. Below these are buttons for 'Name', 'Description', 'Region', and 'Originati.'. A message says 'No applications' and 'Get started by creating an application.' with a 'Create application' button. At the bottom right is a 'Go to myApplications' link. The top navigation bar includes links for IAM, VPC, S3, EC2, Aurora and RDS, Route 53, Certificate Manager, Lambda, Amazon EventBridge, DynamoDB, Simple Notification Service, Key Management Service, CloudFront, and CloudWatch. The top right shows the region 'Asia Pacific (Mumbai)', a user profile 'Nilima (6735-8684-9368)', and a sign-out link. The bottom navigation bar includes CloudShell, Feedback, and Console mobile app, along with standard browser controls like back, forward, and search. The footer shows copyright information for 2026, privacy terms, and cookie preferences, along with language and date/time settings.

The screenshot shows the EC2 service page. On the left, a sidebar lists 'EC2' under 'Compute', with sections for Dashboard, AWS Global View, Events, Instances (selected), Images, and Elastic Block Store. The main content area features a large heading 'Amazon Elastic Compute Cloud (EC2)' with the subtext 'Create, manage, and monitor virtual servers in the cloud.' Below this is a paragraph about EC2's offerings and a 'Benefits and features' section. The 'Benefits and features' section highlights 'EC2 offers ultimate scalability and control' and lists three bullet points: 'Highest level of control of the entire technology stack, allowing full integration with all AWS services', 'Widest variety of server size options', and 'Widest availability of operating systems to choose from including Linux, Windows, and macOS'. To the right, there are two call-to-action boxes: 'Launch a virtual server' with 'Launch instance', 'View dashboard', and 'Get started walkthroughs'; and 'Additional actions' with 'View running instances' and 'Migrate a server'. The bottom navigation bar is identical to the previous screenshot, including CloudShell, Feedback, and Console Mobile App, along with standard browser controls and footer information.

The screenshot shows the AWS Management Console with the URL ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#Addresses. The left sidebar is expanded, showing categories like Images, Elastic Block Store, Network & Security, and Load Balancing. Under Network & Security, the 'Elastic IPs' section is selected. The main content area is titled 'Elastic IP addresses Info' and contains a search bar and a table header with columns for Name, Allocated IPv4 addr..., Type, Allocation ID, and Reverse DNS record. A message at the top right says 'No Elastic IP addresses found in this Region'. At the bottom, there's a section titled 'Select an elastic IP address'.

The screenshot shows the AWS Management Console with the URL ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#AllocateAddress. The left sidebar is collapsed. The main content area is titled 'Allocate Elastic IP address Info' and contains sections for 'Elastic IP address settings' (with options for Public IPv4 address pool, Network border group, and Global static IP addresses), 'Tags - optional' (with a note about tags and a 'Create accelerator' button), and 'Add new tag' (with a note about no tags associated with the resource). The bottom of the screen shows standard browser controls and system status icons.

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.

The screenshot shows the AWS Management Console with the URL ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#Addresses. The left sidebar is expanded to show the 'Elastic IPs' section under 'Network & Security'. A green success message at the top states 'Elastic IP address allocated successfully.' with the address '3.6.71.255'. Below this, the 'Elastic IP addresses (1) Info' table lists the single allocated IP. At the bottom right of the table, there are 'Actions' and 'Associate Elastic IP address' buttons. The status bar at the bottom right shows the date and time as '07-02-2026 11:12 AM'.

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

The screenshot shows the 'Associate Elastic IP address' dialog box. The title is 'Associate Elastic IP address | EC'. The URL in the address bar is ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#AssociateAddress:PublicIp=3.6.71.255. The dialog has a heading 'Associate Elastic IP address Info' and a sub-instruction 'Choose the instance or network interface to associate to this Elastic IP address (3.6.71.255)'. It shows the 'Elastic IP address: 3.6.71.255' and the 'Resource type' section where 'Instance' is selected. A note below says, 'If you associate an Elastic IP address with an instance that already has an Elastic IP address associated, the previously associated Elastic IP address will be disassociated, but the address will still be allocated to your account.' A warning box states, 'If no private IP address is specified, the Elastic IP address will be associated with the primary private IP address.' The 'Instance' field contains the ID 'i-0df7fb7191c6b6a42'. The 'Private IP address' field is empty. Under 'Reassociation', there is a checkbox 'Allow this Elastic IP address to be reassociated'. At the bottom right are 'Cancel' and 'Associate' buttons.

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

The screenshot shows the AWS EC2 Instances page. The left sidebar includes links for IAM, VPC, S3, EC2, Aurora and RDS, Route 53, Certificate Manager, Lambda, Amazon EventBridge, DynamoDB, Simple Notification Service, Key Management Service, CloudFront, and CloudWatch. The main content area displays 'Instances (1/2) Info' with a table showing two instances. The first instance, 'docker' (i-0280a02887f217165), is terminated. The second instance, also 'docker' (i-0df7fb7191c6b6a42), is running and has a Public IPv4 address of 3.6.71.255. The table columns include Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IPv4 DN. Below the table, a detailed view for the running instance shows its Public IPv4 address as 3.6.71.255.

II) Create a Route 53 Public Hosted Zone

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

The screenshot shows the AWS Route 53 Home page. The left sidebar includes links for Route 53, Dashboard, Hosted zones, Health checks, Profiles, Global Resolver, VPC Resolver, Domains, and Traffic flow. The main content area features the 'Amazon Route 53' section with the heading 'A reliable way to route users to internet applications'. It includes a diagram showing a request from a user to Amazon Route 53, which then routes the request to a destination. To the right, there are sections for 'Get started with Route 53', 'Pricing (US)', and 'More resources'. The 'Get started with Route 53' section contains a 'Get started' button. The 'Pricing (US)' section includes a 'View pricing' link. The 'More resources' section lists Documentation, API reference, and FAQs.

Instances | EC2 | ap-south-1 Hosted zones | Route 53 | Global Domain Overview | Hostinger

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

aws Search [Alt+S]

IAM VPC S3 EC2 Aurora and RDS Route 53 Certificate Manager Lambda Amazon EventBridge DynamoDB Simple Notification Service Key Management Service CloudFront CloudWatch Metrics

Route 53 > Hosted zones

Hosted zones (0)

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

Filter records by property or value

Hosted zone name	Type	Created by	Record count	Description	Hosted zone ID
No hosted zones					

There are no hosted zones created for this account.

Create hosted zone

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ENG IN 11:21 AM 07-02-2026

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

Instances | EC2 | ap-south-1 Route 53 | Global Domain Overview | Hostinger

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

aws Search [Alt+S]

IAM VPC S3 EC2 Aurora and RDS Route 53 Certificate Manager Lambda Amazon EventBridge DynamoDB Simple Notification Service Key Management Service CloudFront CloudWatch Metrics

Route 53 > Hosted zones > Create hosted zone

Create hosted zone Info

Hosted zone configuration

A hosted zone is a container that holds information about how you want to route traffic for a domain, such as example.com, and its subdomains.

Domain name Info
This is the name of the domain that you want to route traffic for.

Valid characters: a-z, 0-9, ! # \$ % & ' () * + , - / ; < = > ? @ [\] ^ _ ` { } . ~

Description - optional Info
This value lets you distinguish hosted zones that have the same name.

The description can have up to 256 characters. 0/256

Type Info
The type indicates whether you want to route traffic on the internet or in an Amazon VPC.

Public hosted zone
A public hosted zone determines how traffic is routed on the internet.

Private hosted zone
A private hosted zone determines how traffic is routed within an Amazon VPC.

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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.

`nikhilesh.sbs was successfully created.`
Now you can create records in the hosted zone to specify how you want Route 53 to route traffic for your domain.

Hosted zone details

Records (2) Accelerated recovery DNSSEC signing Hosted zone tags (0)

Records (2) Info
Automatic mode is the current search behavior optimized for best filter results. [To change modes go to settings.](#)

Record name	Type	Routing policy	Alias	Value/Route traffic to	TTL (s...)	Health ...	Evaluat...
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	-	-
nikhilesh.sbs	SOA	Simple	-	No ns-2018.awsdns-60.co.uk. a...	900	-	-

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

Record 1

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

Keep blank to create a record for the root domain.

Alias

Value [Info](#) `3.6.71.255`

Enter multiple values on separate lines.

TTL (seconds) [Info](#) `300` **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 **Create records**

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

The screenshot shows the AWS Route 53 console with the hosted zone details for 'nikhilesh.sbs'. The 'Records' tab is selected, showing the following table:

Record name	Type	Value	TTL (s...)	Health ...	Evalu...
nikhilesh.sbs	A	Simple ns-2018.awsdns-60.co.uk.	300	-	-
nikhilesh.sbs	NS	Simple ns-634.awsdns-15.net.	172800	-	-
nikhilesh.sbs	SOA	Simple ns-308.awsdns-38.com.	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.

The screenshot shows the Hostinger domain management interface under the 'DNS / Nameservers' tab. The 'Nameservers' section displays the following list:

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

A purple 'Change Nameservers' button is located below the list. The 'Manage DNS records' section contains a note: "Your domain's DNS records are currently managed elsewhere. To edit DNS records in Hostinger, please switch your nameservers to Hostinger's."

The screenshot shows the 'DNS / Nameservers' section of the Hostinger control panel. On the left sidebar, under 'Domains', the 'DNS / Nameservers' option is selected. In the main content area, a modal window titled 'Select Nameservers' is open. It contains two radio button options: 'Use Hostinger nameservers (recommended)' and 'Change nameservers'. The 'Change nameservers' option is selected. Below this, a list of four nameservers is shown in input fields: 'ns-2018.awsdns-60.co.uk', 'ns-634.awsdns-15.net', 'ns-308.awsdns-38.com', and 'ns-1121.awsdns-12.org'. At the bottom of the modal are 'Save' and 'Cancel' buttons. Below the modal, a section titled 'Manage DNS records' is visible, containing a note about domain behavior and a message stating 'Your domain's DNS records are currently managed elsewhere. To edit DNS records in Hostinger, please switch your nameservers to Hostinger's.' The status bar at the bottom right shows the date and time as 07-02-2026 11:23 AM.

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.)

The screenshot shows the same 'DNS / Nameservers' section as the previous one, but now a modal window titled 'Nameservers changed!' is displayed. It states 'Your nameservers has been changed to:' followed by a list of four nameservers: 'ns-1121.awsdns-12.org', 'ns-2018.awsdns-60.co.uk', 'ns-308.awsdns-38.com', and 'ns-634.awsdns-15.net'. Below this, a note says 'It might take up to 24 hours for the domain to propagate to the new nameservers.' At the bottom of the modal are 'Close' and 'OK' buttons. The status bar at the bottom right shows the date and time as 07-02-2026 11:23 AM.

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.

