

Placement Empowerment Program

Cloud Computing and DevOps Centre

Implement DNS for Your Application: Set up a DNS record to map your web application's IP or load balancer to a domain name.

Name: Nantha Krishnan.G.K.

Department: AML

Introduction

Domain Name System (DNS) is a crucial component of web applications, enabling human-readable domain names (e.g., `www.example.com`) to be mapped to machine-readable IP addresses. This eliminates the need for users to remember complex numerical IP addresses, enhancing accessibility and user experience.

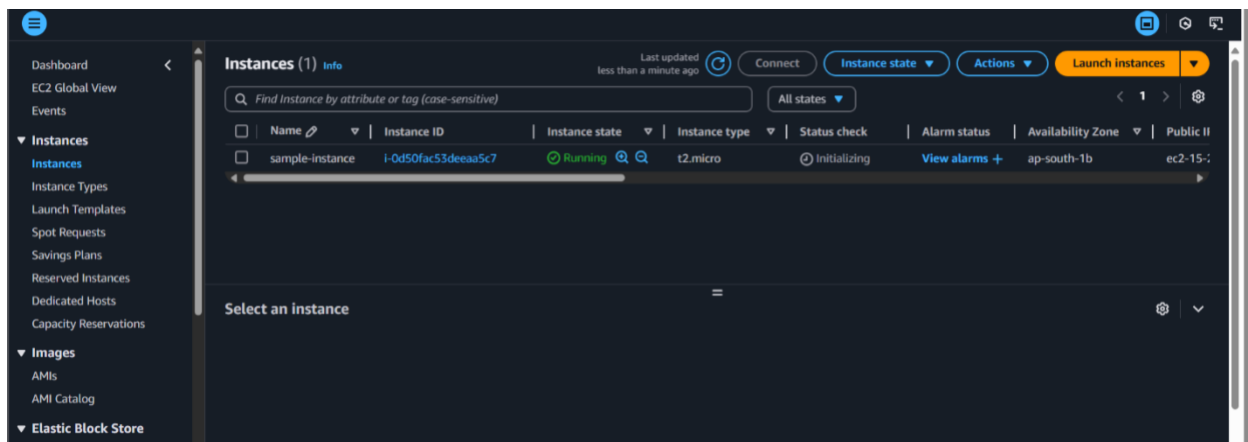
Objectives

- Set up a DNS record using a cloud provider's DNS service (e.g., AWS Route 53).
- Map your web application's IP or Load Balancer to a domain name.
- Verify and test DNS resolution by accessing the domain in a web browser.

Step by Step Overview

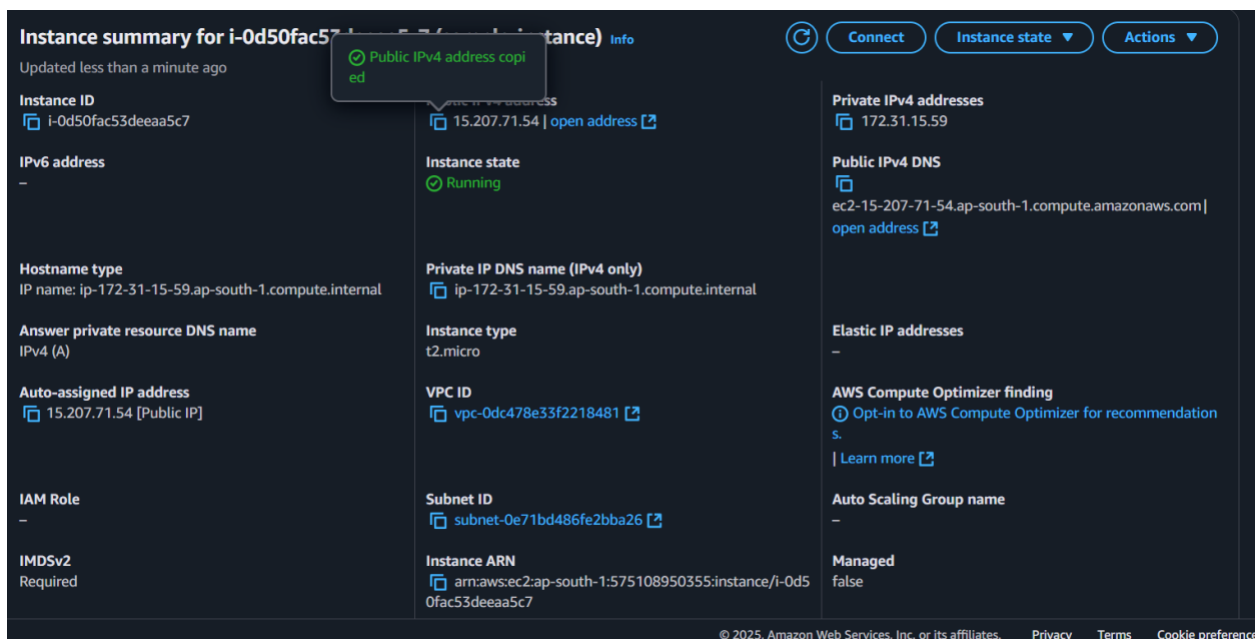
1. Create an EC2 instance

- log into your aws account.
- create an EC2 instance.



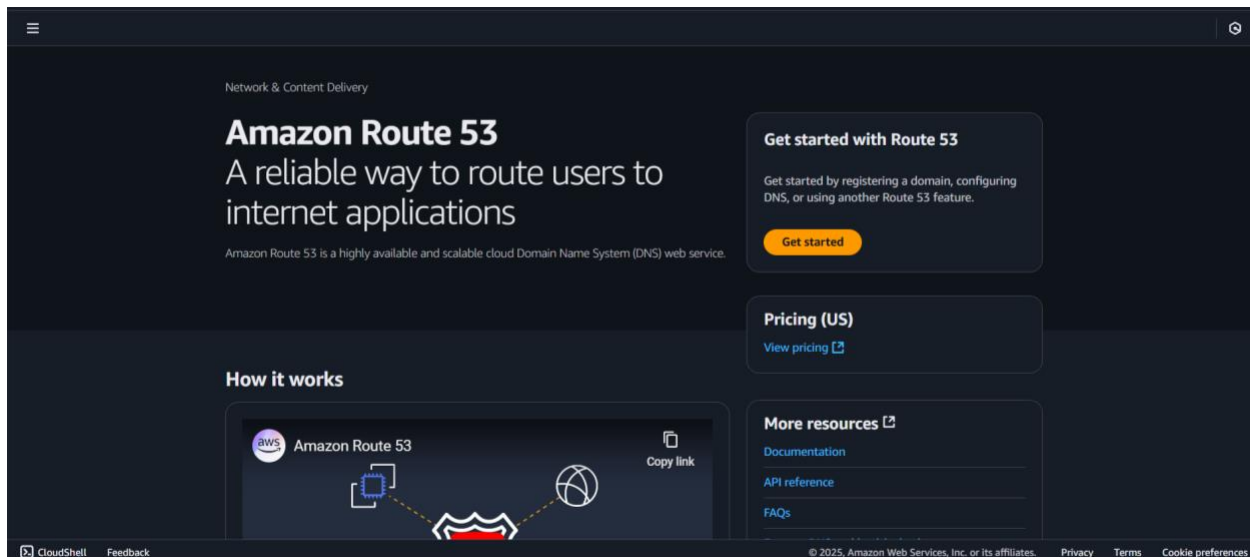
2. Open the EC2 dashboard

Find your instance and copy the Public IPv4 Address.

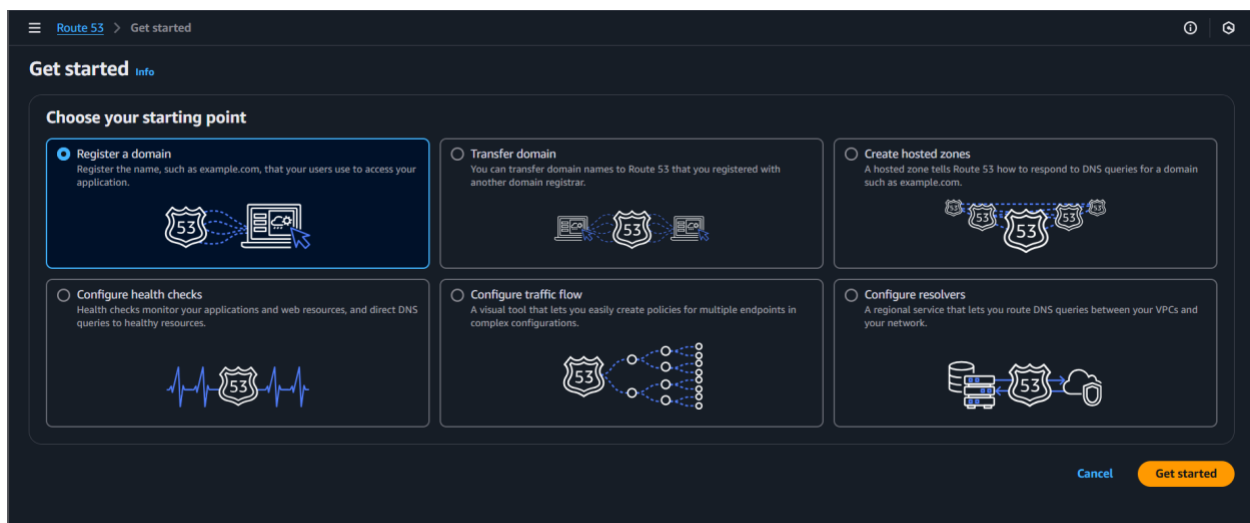


3. Register a domain name



- Open Amazon Route53



- Click **Register Domain** and follow the steps to purchase a domain.

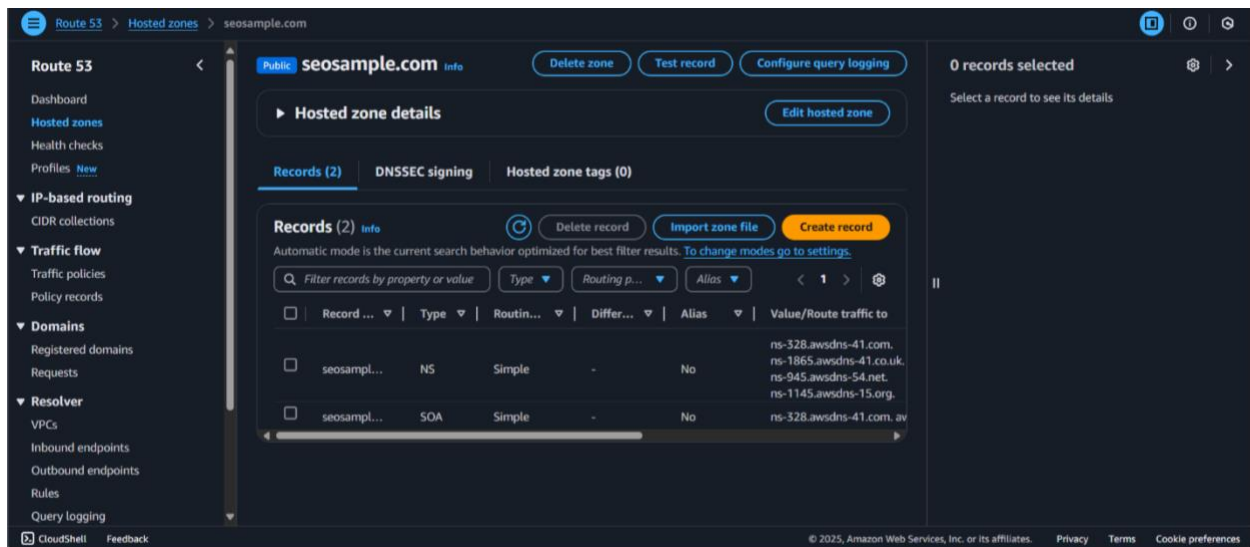


- Now you have successfully registered a Domain. (it might take a few minutes)

Notifications 1			
<input type="text" value="Find notifications"/>			< 1 >
Resource	Status	Last update	
seosample.com	 Domain registration successful	2025-02-05 14:22:09	

4. Hosted Zone

When you register the domain, AWS automatically creates a host zone.



The screenshot shows the AWS Route 53 console for the domain 'seosample.com'. The 'Hosted zones' page is active, showing 'Hosted zone details' and a table of 'Records (2)'. The records table has the following data:

Record ...	Type	Routin...	Differ...	Alias	Value/Route traffic to
seosampl...	NS	Simple	-	No	ns-328.awsdns-41.com. ns-1865.awsdns-41.co.uk. ns-945.awsdns-54.net. ns-1145.awsdns-15.org.
seosampl...	SOA	Simple	-	No	ns-328.awsdns-41.com. aw

5. Create Records

- Click **Create record**.
- Choose **Simple routing** → Click Next.
- Configure the record:
 - Record name: Leave blank for root domain (example.com) or enter www for www.example.com.
 - Record type: Choose **A – IPv4 address**.
 - Value: Paste your EC2 Public IPv4 Address (e.g., 3.123.45.67).

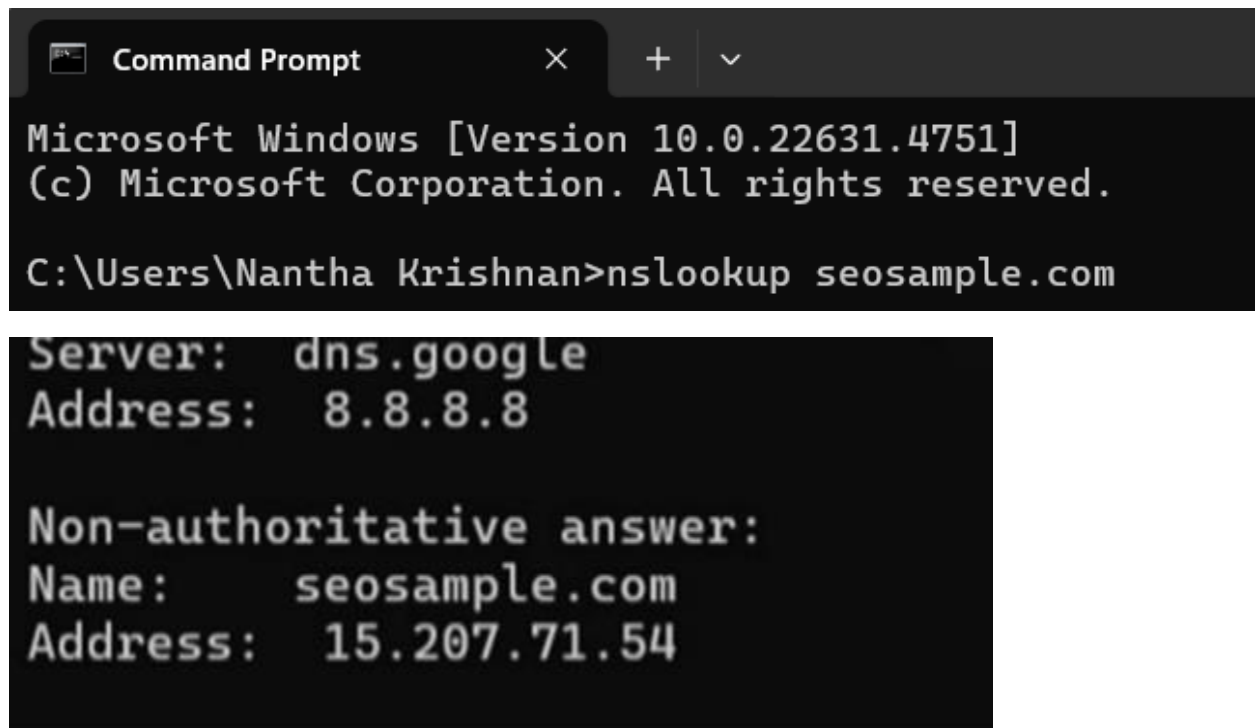
- TTL: Keep default (300 seconds).
- Click Create record.

Record ...	Type	Routin...	Differ...	Alias	Value/Route traffic to
seosampl...	A	Simple	-	No	15.207.71.54

6. Verify the Domain

Wait a few minutes, then test if the domain resolves correctly.

Using **nslookup <domainname.com>** - you can test the configurations of your EC2 instance.



```
Command Prompt
Microsoft Windows [Version 10.0.22631.4751]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Nantha Krishnan>nslookup seosample.com

Server:      dns.google
Address:     8.8.8.8

Non-authoritative answer:
Name:       seosample.com
Address:    15.207.71.54
```

Outcome:

- Custom Domain Access
- Improved User Experience & Branding
- DNS Mapping to Web Application
- Verification of DNS Configuration