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.

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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

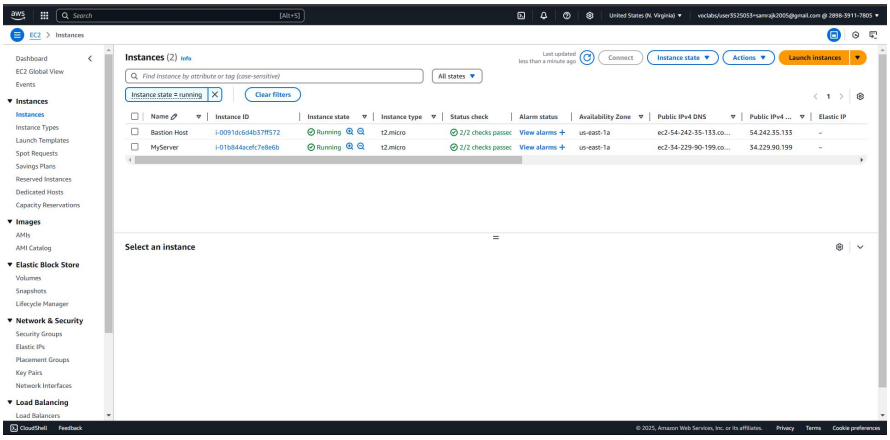
- Set up a DNS record using a cloud provider's DNS service (e.g., AWS Route 53).
- Map your web application's IP or Load Balancer to a domain name.
- Verify and test DNS resolution by accessing the domain in a web browser.

Step by Step Overview

1. Create an EC2 instance

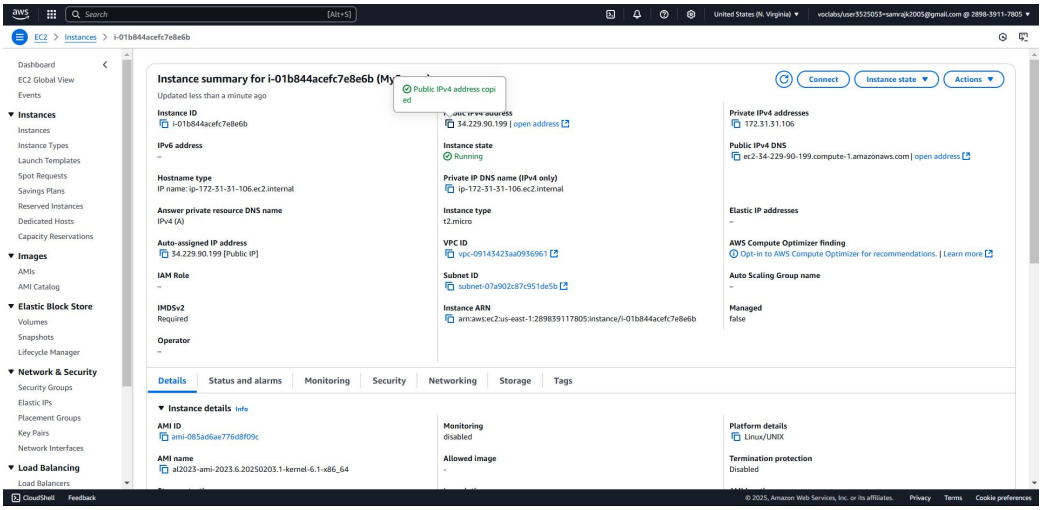
- log into your aws account.

- create an EC2 instance.



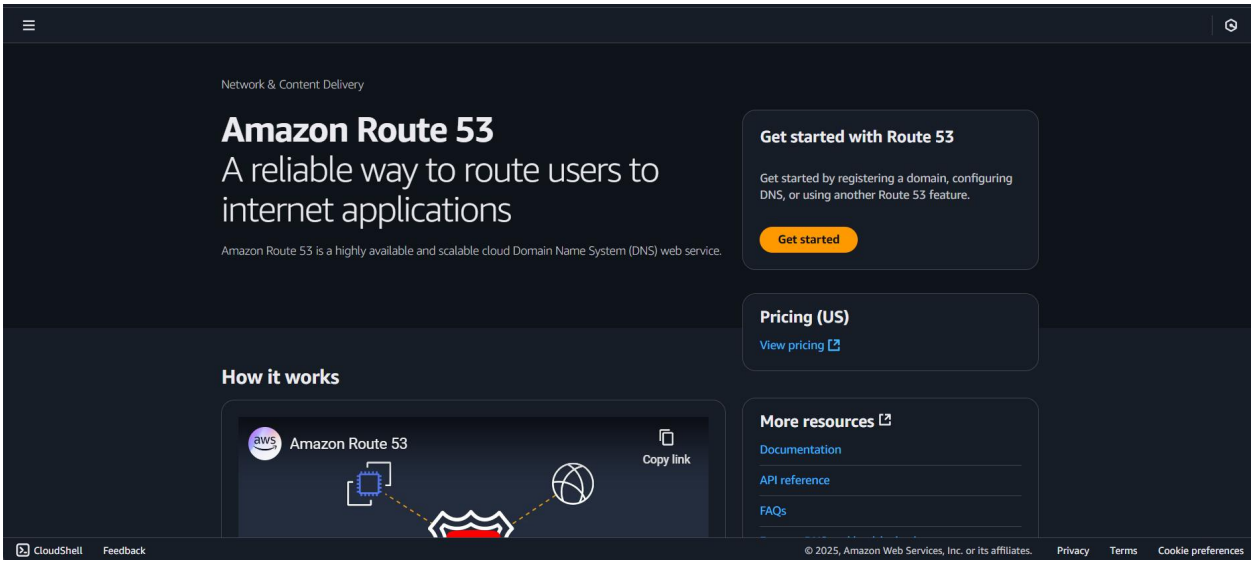
2. Open the EC2 dashboard

Find your instance and copy the Public IPv4 Address.

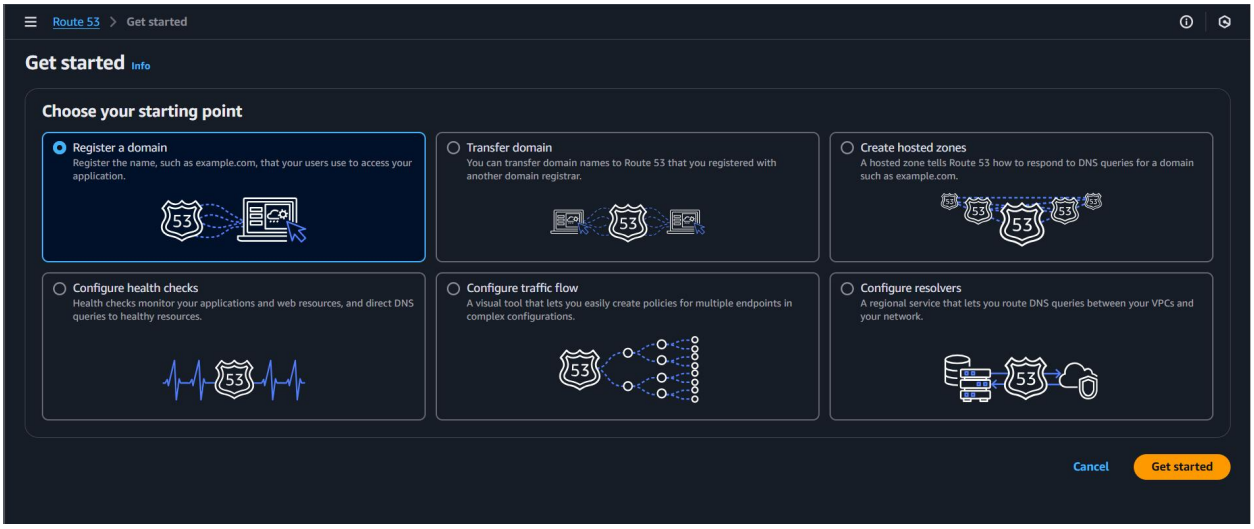


3. Register a domain name

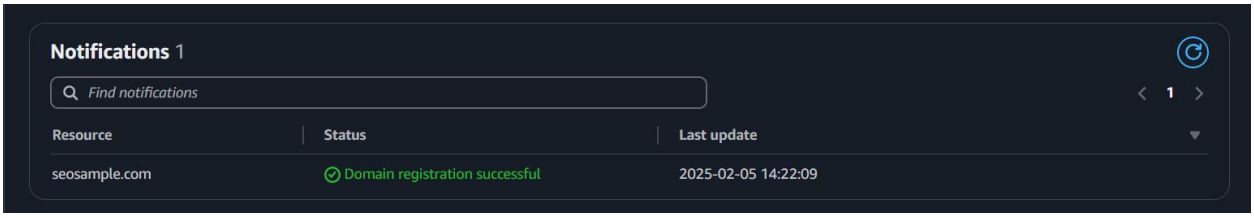
- Open Amazon Route53



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

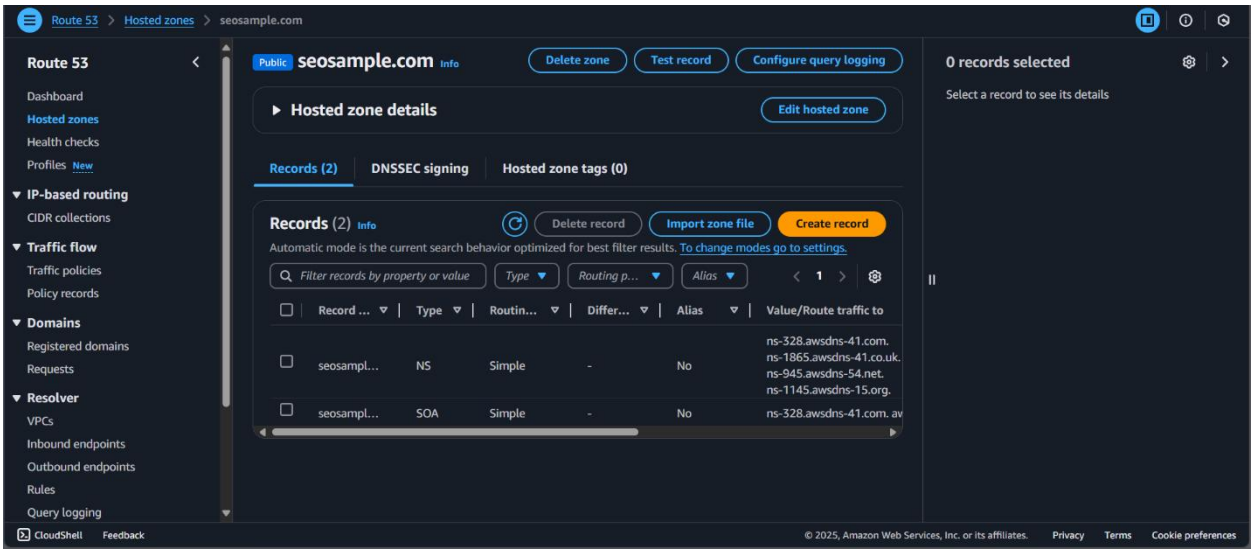


- Now you have successfully registered a Domain. (it might take a few minutes)



4. Hosted Zone

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



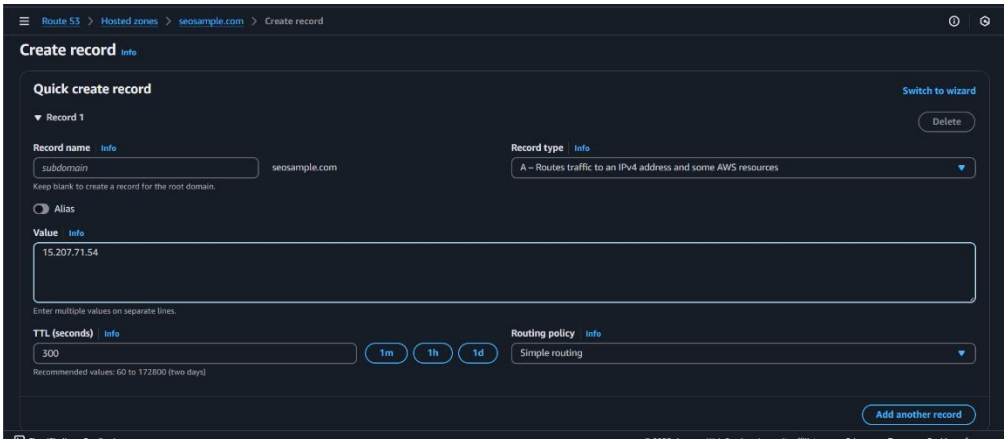
5. Create Records

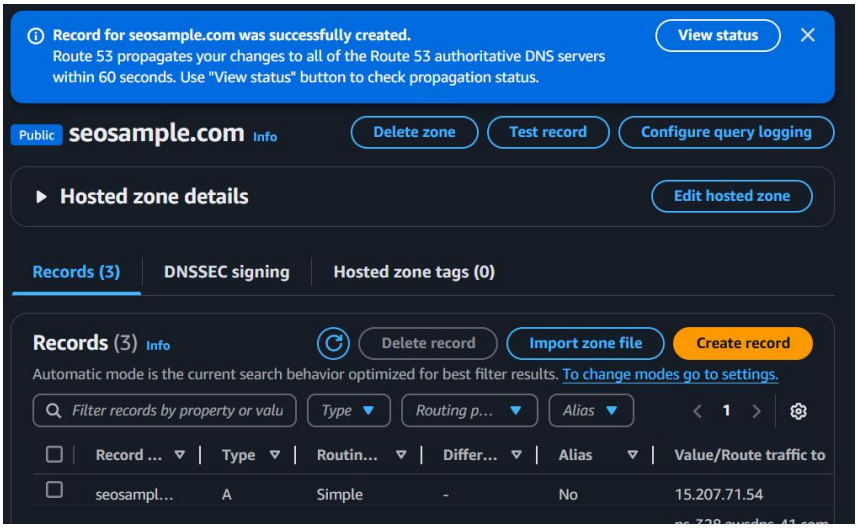
- Click **Create record**.

- 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.





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.

```
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