AWS

DNS & Route 53
Basic

Concept Overview:

What is DNS	1
How it works	2
Introduction Route 53	3
Features of Route 53	4
Overview of Route 53 section on AWS Console	5

What is DNS:

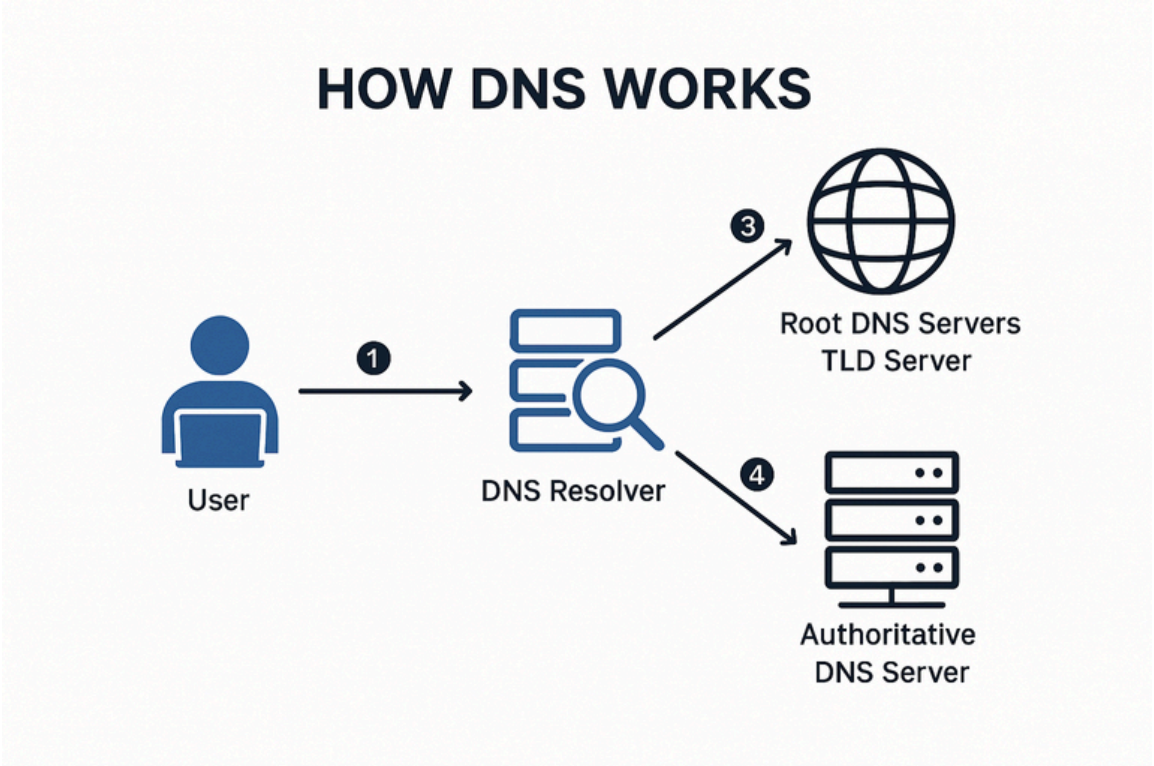
DNS, or the Domain Name System, translates human readable domain names (for example, www.amazon.com) to machine readable IP addresses (for example, 192.0.2.44).

All computers on the Internet, from your smart phone or laptop to the servers that serve content for massive retail websites, find and communicate with one another by using numbers.

These numbers are known as IP addresses. When you open a web browser and go to a website, you don't have to remember and enter a long number. Instead, you can enter a domain name like example.com and still end up in the right place.

How it works:

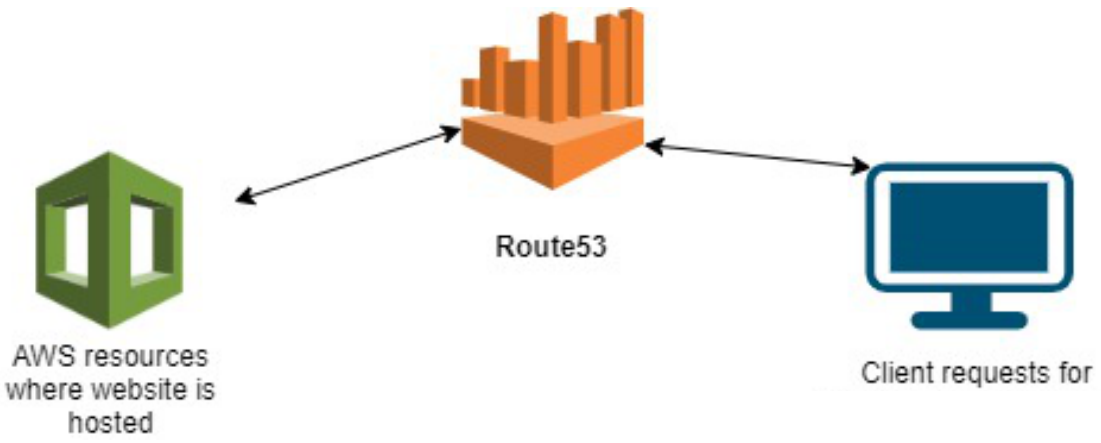
- **User enters domain:** such as example.com in browser
- **Browser checks local cache:** If IP found, skips DNS lookup
- **OS checks system cache:** If not found, sends query to DNS resolver
- **DNS resolver (usually ISP):** Checks its cache
- **If no cache hit:** Resolver queries Root DNS servers
- **Root server responds:** Points to TLD server (such as .com)
- **TLD server responds:** Points to Authoritative DNS server
- **Authoritative server responds:** Returns IP address of the domain
- **Resolver caches result:** Sends IP to browser
- **Browser connects to IP:** Loads website



Introduction Route 53:

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

You can use Route 53 to perform three main functions in any combination: domain registration, DNS routing, and health checking.



Features of Route 53:

Register domain names:
Your website needs a name, such as example.com. Route 53 lets you register a name for your website or web application, known as a domain name.

Route internet traffic to the resources for your domain:
When a user opens a web browser and enters your domain name (example.com) or subdomain name (acme.example.com) in the address bar, Route 53 helps connect the browser with your website or web application.

Check the health of your resources:
Route 53 sends automated requests over the internet to a resource, such as a web server, to verify that it's reachable, available, and functional. You also can choose to receive notifications when a resource becomes unavailable and choose to route internet traffic away from unhealthy resources.

Features of Route 53:

Route 53 Resolver:
Get recursive DNS for your Amazon VPCs in AWS Regions, VPCs in AWS Outposts racks, or any other on-premises networks. Create conditional forwarding rules and Route 53 endpoints to resolve custom names mastered in Route 53 private hosted zones or in your on-premises DNS servers.

Amazon Route 53 Resolver on Outposts:
Connect Route 53 Resolver on Outpost racks with DNS servers in your on-premises data centers through Route 53 Resolver endpoints. This enables resolution of DNS queries between the Outposts racks and your other on-premises resources.

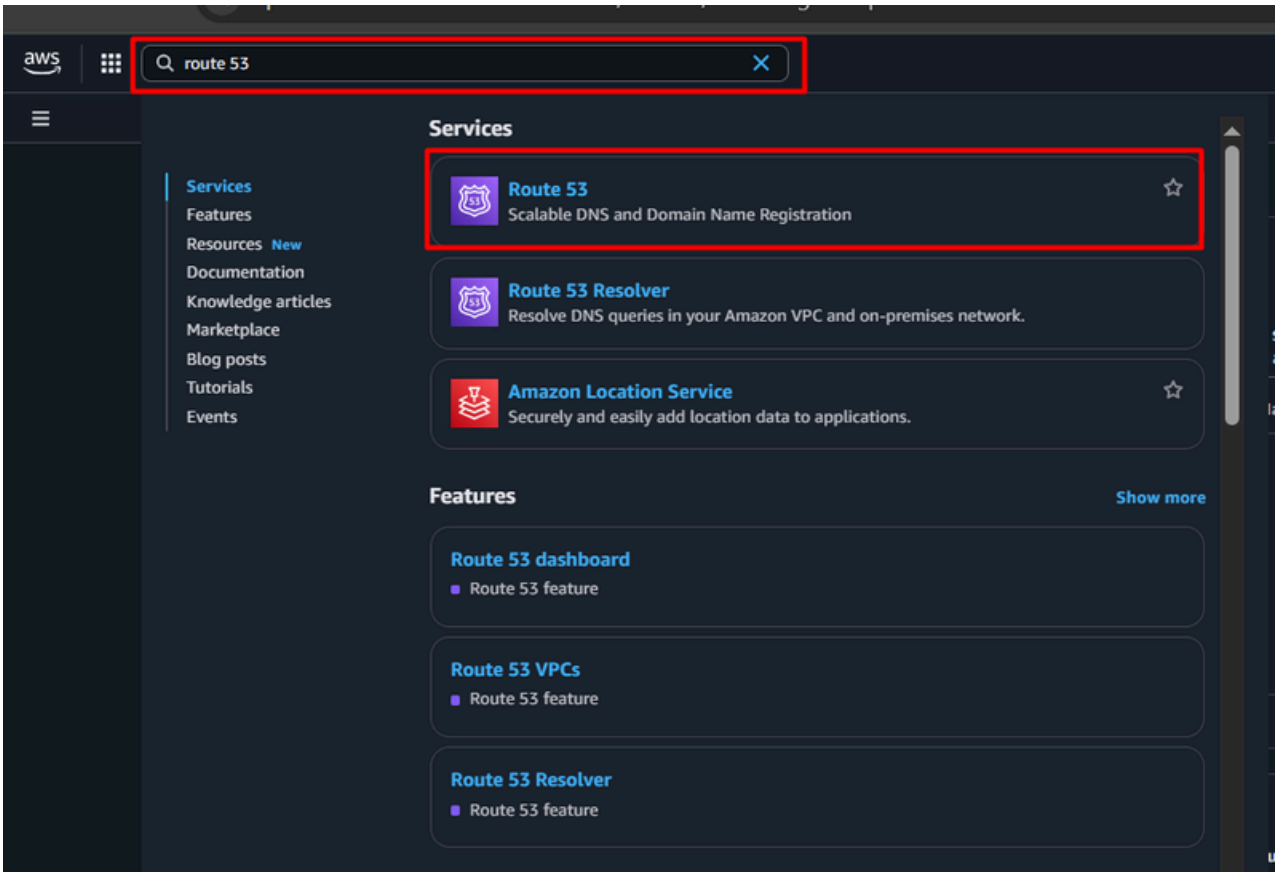
Route 53 Resolver DNS Firewall:
Protect your recursive DNS queries within the Route 53 Resolver. Create domain lists and build firewall rules that filter outbound DNS traffic against these rules.

Traffic Flow:
Easy-to-use and cost-effective global traffic management: route end users to the best endpoint for your application based on geoproximity, latency, health, and other considerations.

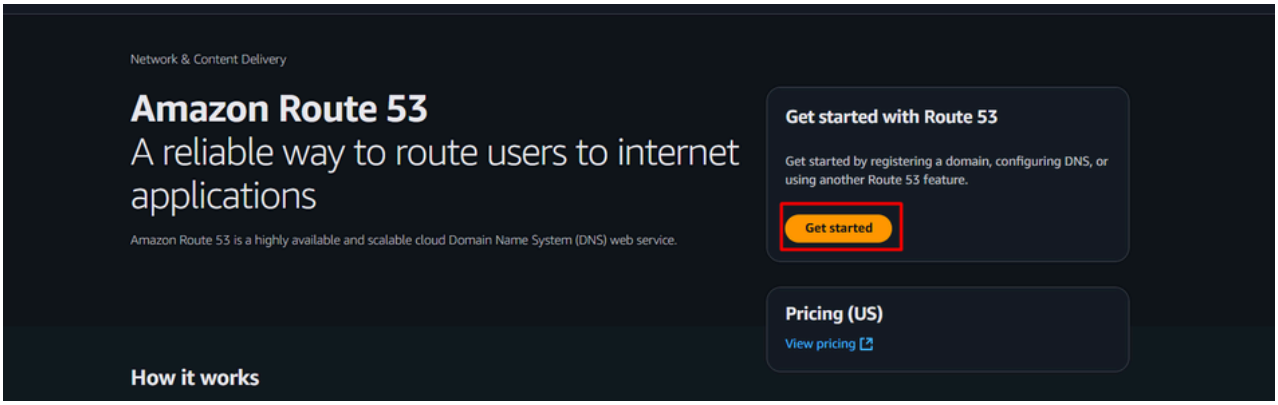
Amazon Route 53 Profiles:
With Route 53 Profiles, you can apply and manage DNS-related Route 53 configurations across many VPCs and in different AWS account.

Overview of Route 53 section on AWS Console:

First sign in into your AWS console. Then search for Route 53.

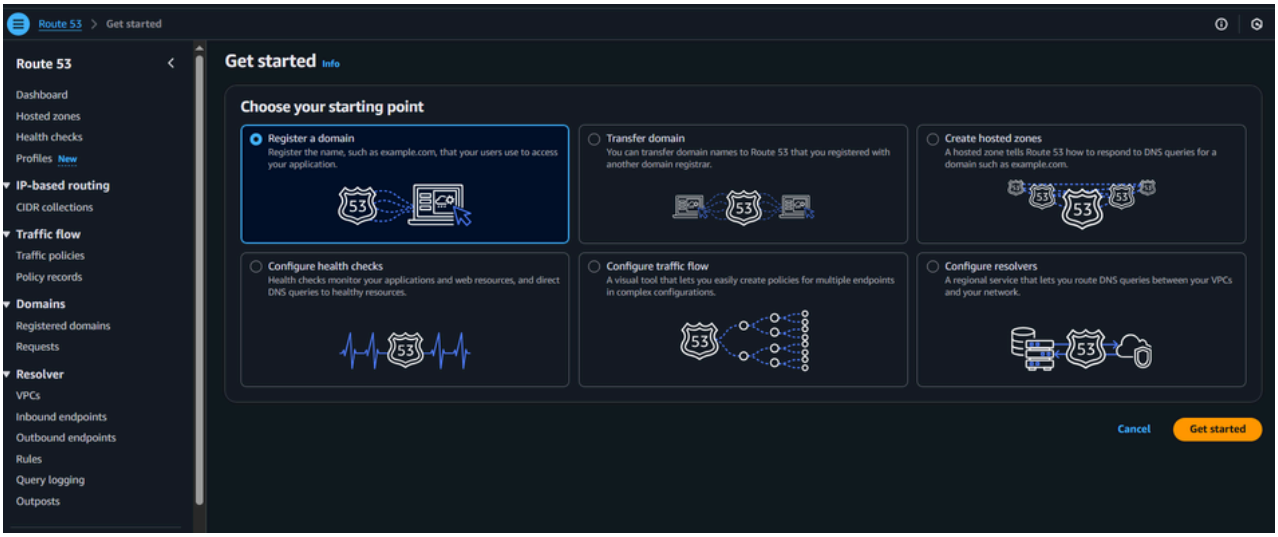


Click on Route 53 to open this page.



Overview of Route 53 section on AWS Console:

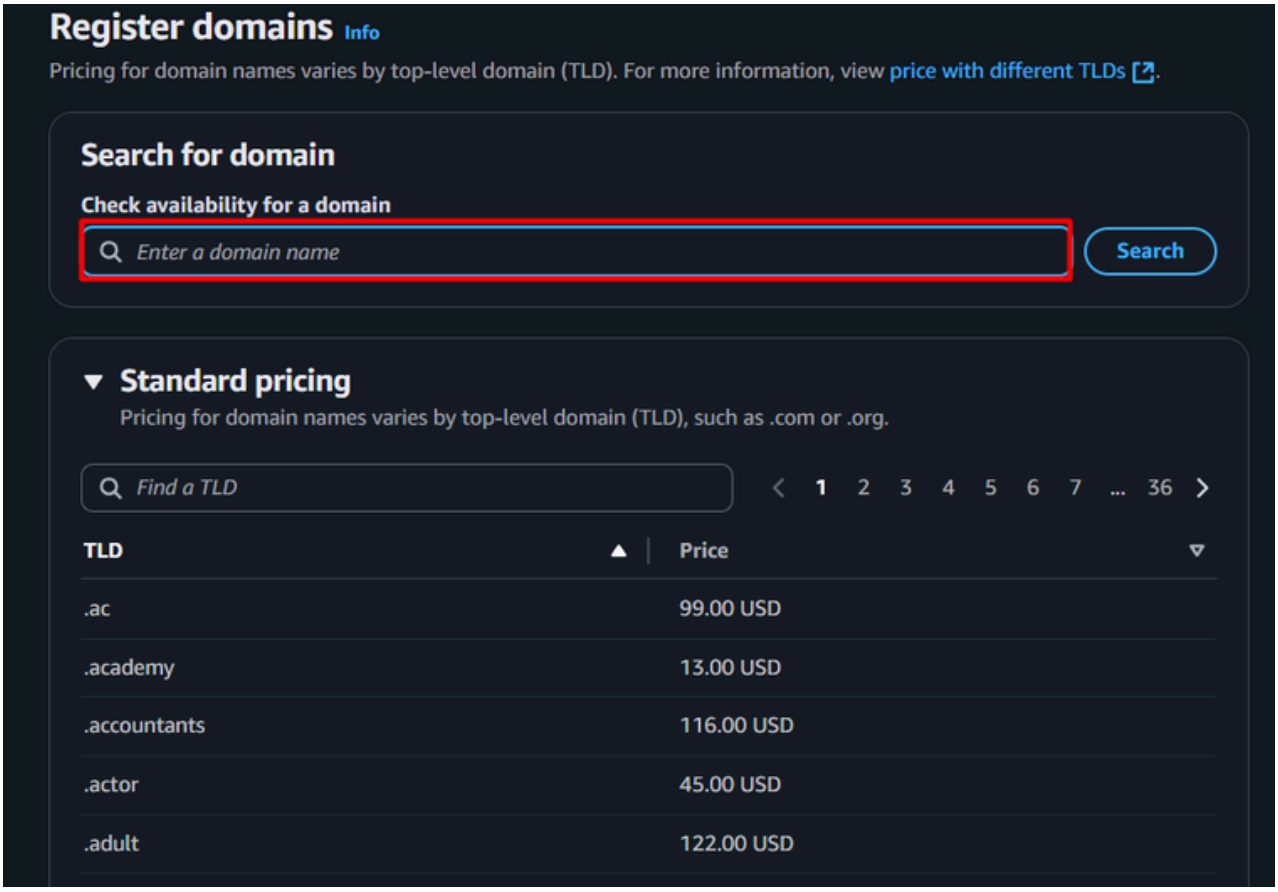
Click on the Get Started button to open this page. Now, you can begin with any feature you need.

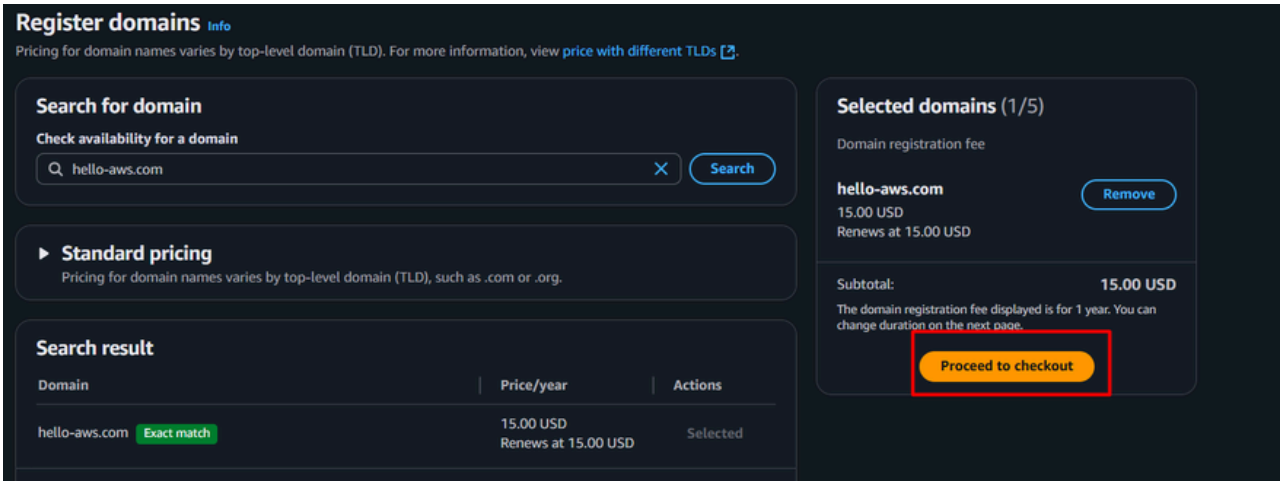


If you don’t have a domain, you can start with the domain registration service. From here, you can purchase a new domain. When you purchase a domain from Route 53, you don’t need to create a hosted zone. It’s already included with your newly purchased domain.

Overview of Route 53 section on AWS Console:

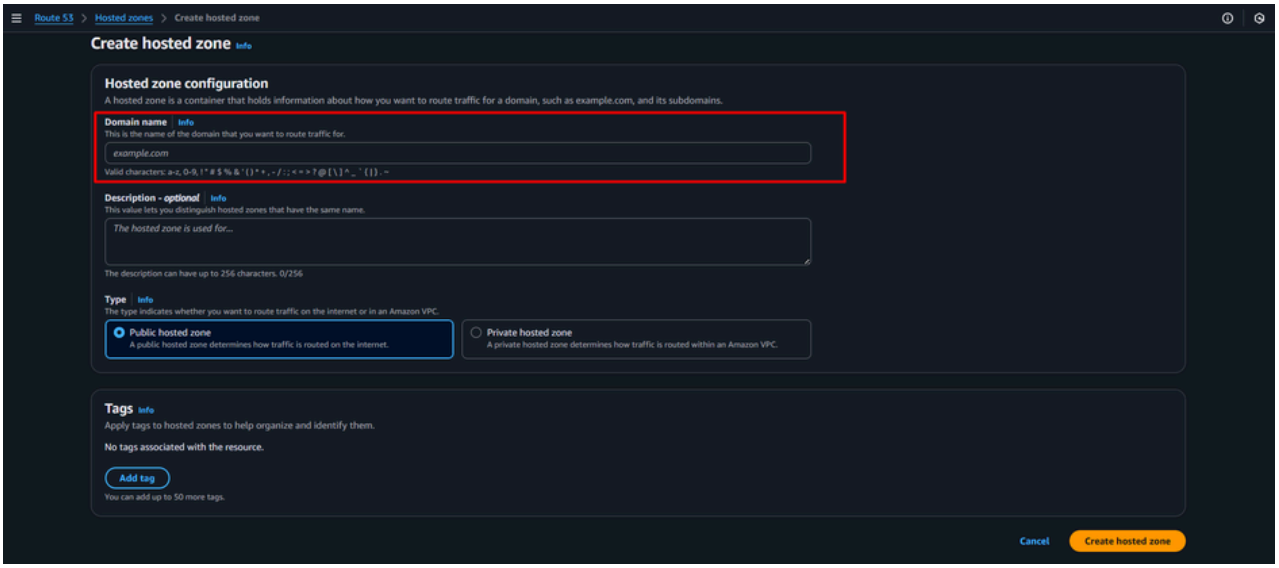
Type your domain name and click the Search button. If it is available, check the price, select it, and purchase instantly.





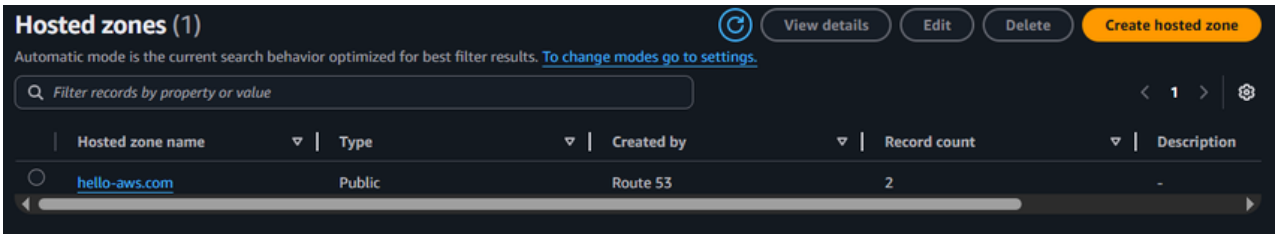
Overview of Route 53 section on AWS Console:

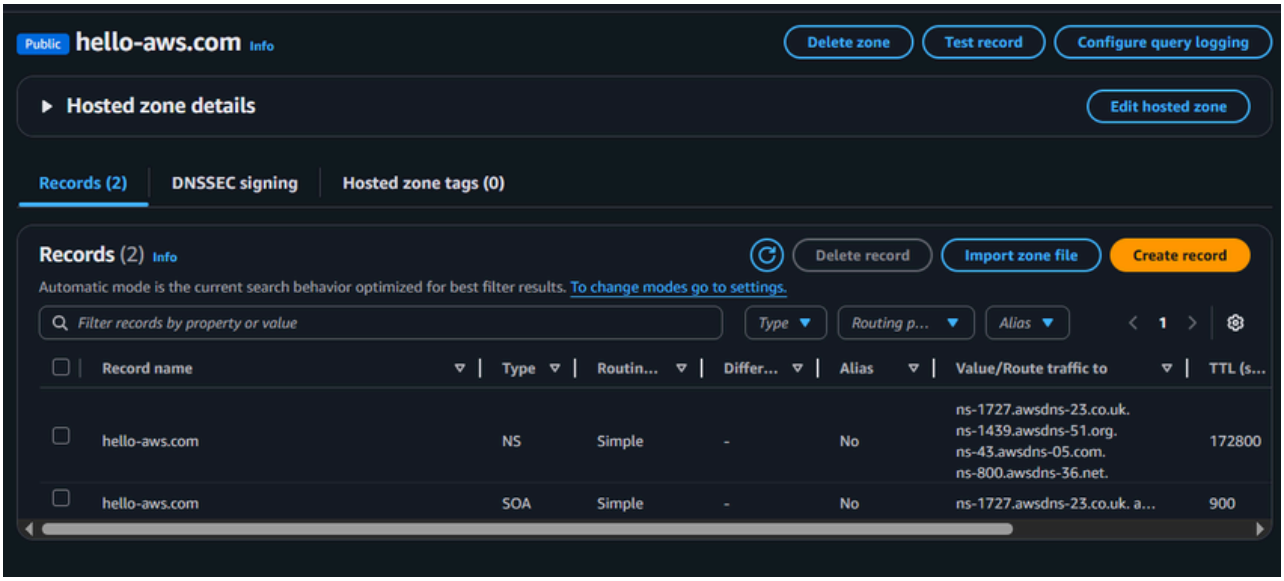
If you already have a domain you can create a hosted zone with you domain.

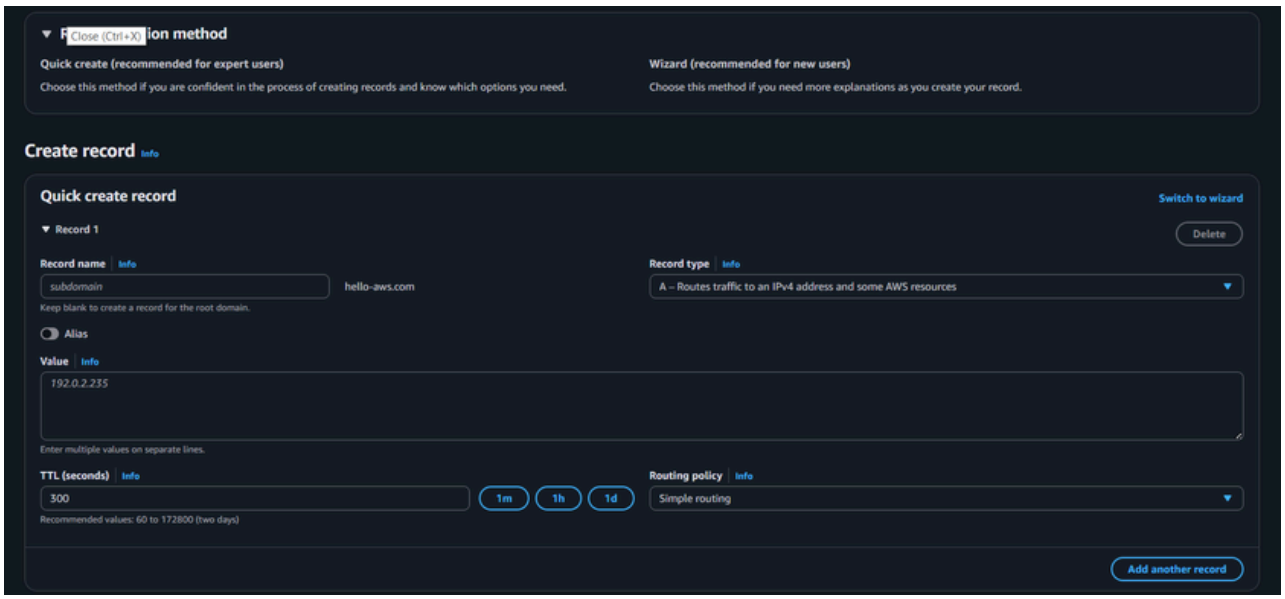


Overview of Route 53 section on AWS Console:

After creating a hosted zone, you will see it like this. Choose your domain, add a new record, and complete the other configurations.

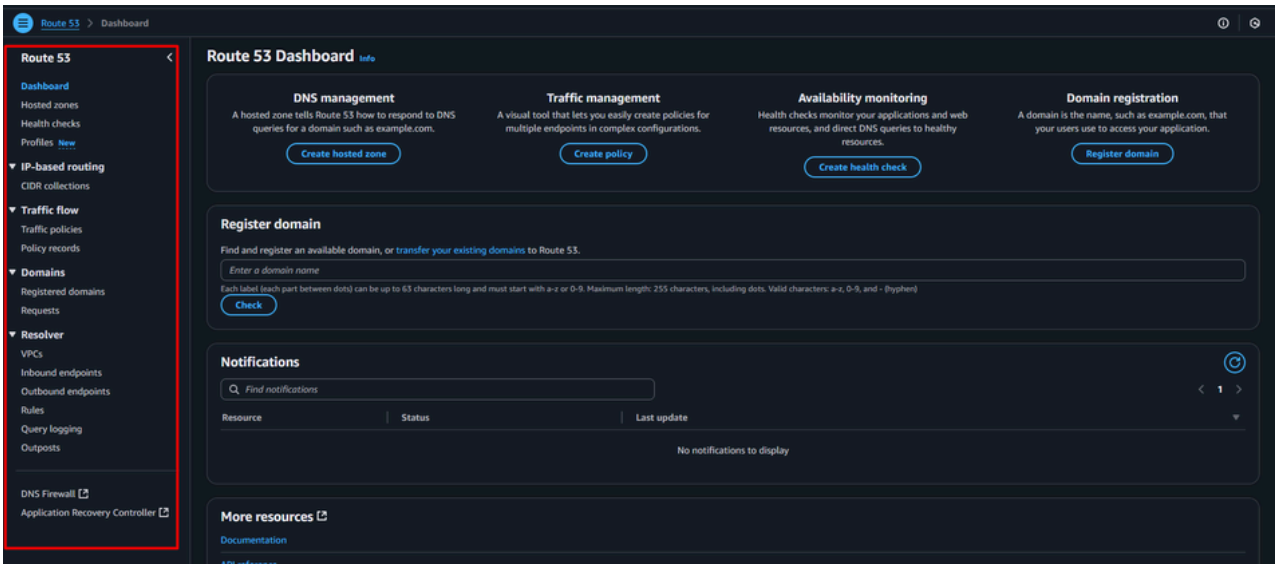






Overview of Route 53 section on AWS Console:

For this overview session, I discussed two features of Route 53. If you need any other services, you can configure them from this section and use them as needed.



Thank You

Stay Connect:

 /in/alamgirweb11

 /alamgirweb11