

Hands-On with AWS Route 53: Domain Setup, DNS Records & Traffic Routing in Action

Recently worked through a hands-on setup of **Amazon Route 53**, diving into domain registration, DNS management, routing policies, and health checks. Here's a quick walkthrough of what I explored, along with screenshots and key learnings from this practice.

What is Route 53?

Amazon Route 53 is a **global service** used for:

- Domain Registration
- DNS Management
- Traffic Routing
- Health Monitoring

It helps direct end-user requests to AWS infrastructure in a low-latency, fault-tolerant, and highly available manner.

Key Functionalities

1 Domain Registration

✓ Purchase or transfer domain names directly via AWS.

2 DNS Management

✓ Manage DNS records like A, AAAA, CNAME, NS, and SOA.

3 Traffic Management

✓ Route traffic based on latency, weight, geolocation, or failover policies.

4 Health Monitoring

✓ Check the health of endpoints like web servers or ELBs.

Types of Top-Level Domains (TLDs)

Generic TLDs (gTLDs):

.com, .org, .net

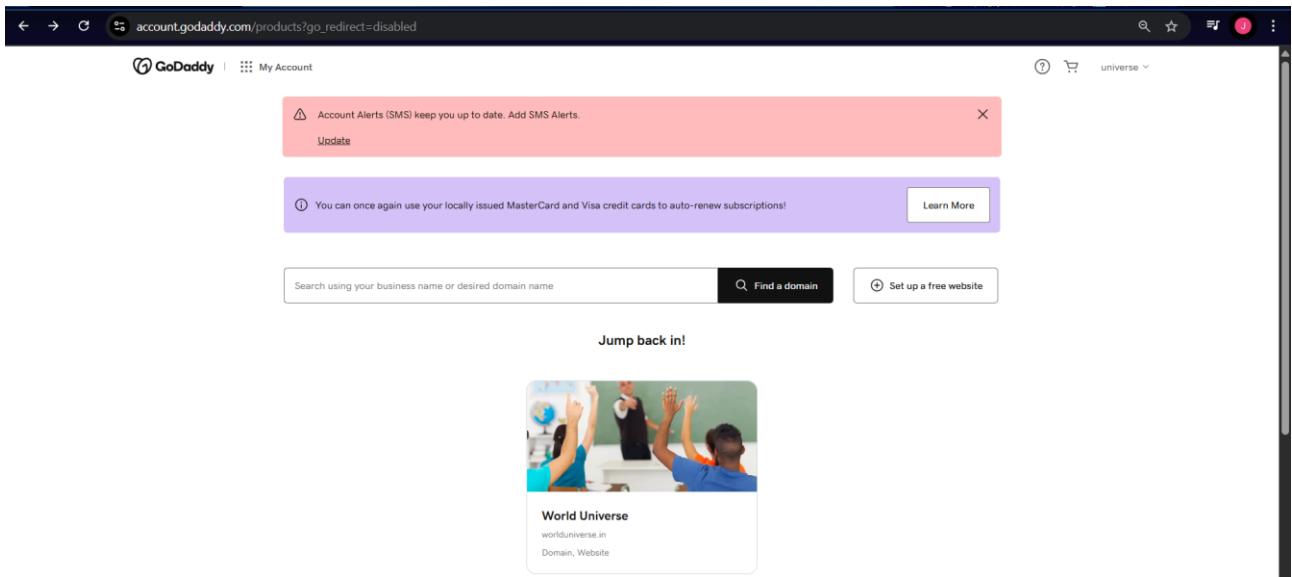
Country-code TLDs (ccTLDs):

.in, .us, .uk, .cn, .pk

Domain Provider/Registrar

A **domain registrar** is a service that sells domain names.

- AWS Route 53 acts as a registrar
- Other providers: GoDaddy, Namecheap, etc.



Screenshot 1: Purchasing a domain from GoDaddy

Hosted Zone

A **hosted zone** is a container for DNS records of a domain.

- Auto-created when you register a domain in Route 53
- Contains:
 - **4** Name Server (NS) records
 - **1** Start of Authority (SOA) record

Record	Type	Value	TTL	Health
rohan.com	NS	ns-1959.awsdns-52.co.uk. ns-280.awsdns-35.com. ns-530.awsdns-02.net. ns-1194.awsdns-21.org.	172800	-
rohan.com	SOA	ns-1959.awsdns-52.co.uk. a...	900	-

Screenshot 2: Hosted zone view in Route 53

Types of DNS Records

Record	Description
A	Maps domain to an IPv4 address
AAAA	Maps domain to an IPv6 address
CNAME	Maps alias to another domain
NS	Lists name servers for the domain
SOA	Holds admin data, refresh interval, etc.

Screenshot 3: Creating an A record in Godaddy

Screenshot 4: Creating a CNAME in Godaddy

Routing Policies in Route 53

1 Simple Routing

Round-robin distribution to multiple endpoints.

2 Failover Routing

Primary server is used until it fails; traffic then shifts to backup.

3 Geolocation Routing

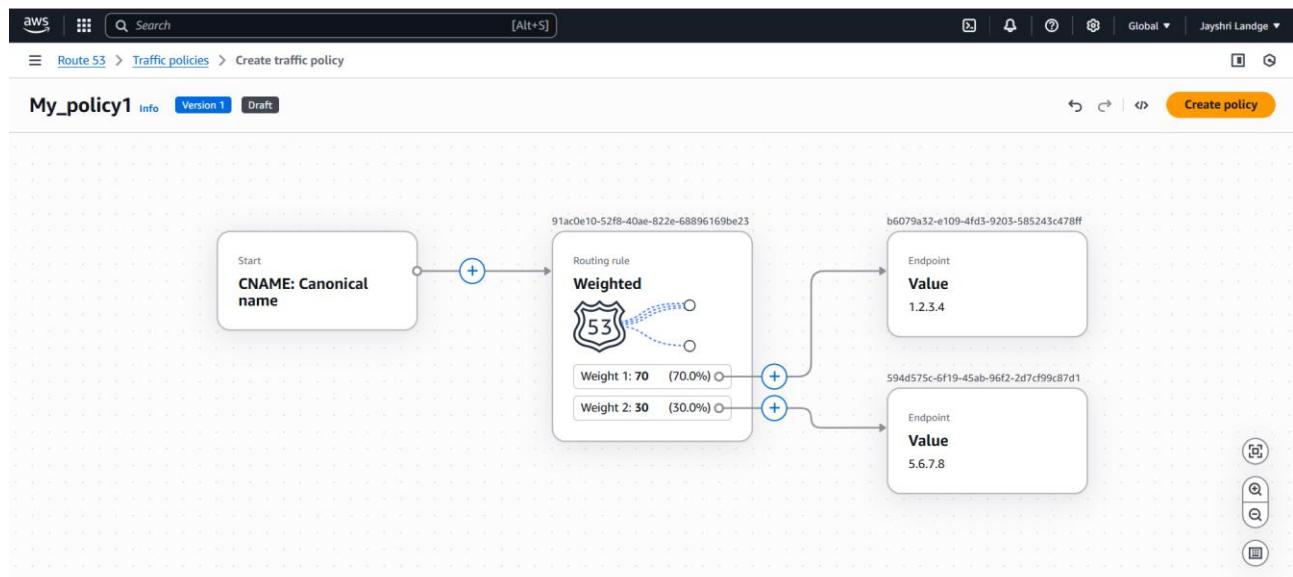
Users are routed based on geographic location.

4 Latency-Based Routing

Routes traffic to the server with the lowest latency.

5 Weighted Routing

Assign traffic percentages to resources (e.g., 70%-30%).



Screenshot 5: Creating a weighted routing policy

Conclusion

With **Route 53**, you not only register and manage domains, but also gain robust traffic distribution, fault tolerance, and monitoring across your infrastructure. It's a core building block for **highly available** and **low-latency applications** on AWS.

Whether you're running a global website or deploying microservices across regions, Route 53 ensures your traffic gets to the right destination—intelligently and reliably.