Route53

Amazon Route 53 is a highly available and scalable cloud domain name system (DNS) service. Enables to customize DNS routing policies to reduce latency.

We can use Route 53 to perform three main functions in any combination:

- Domain registration,
- DNS routing,
- Health checking

Route53

Steps in setting up a website with a domain name (for example, vinuai.com)

- Step I : Buy the domain name vinuai.com (Domain Registrar)
- Step II : Setup your website content (Website Hosting)
- Step III : Route requests to vinuai.com to my website host server (DNS)

Route 53 = Domain Registrar + DNS

- Buy your domain name
- Setup your DNS routing for vinuai.com

Route53: DNS (Domain Name Server)

How should traffic be routed for vinuai.com?

Configure Records:

- Route api.vinuai.com to the IP address of api server
- Route static. vinuai.com to the IP address of http server
- Each record is associated with a TTL (Time To Live) - How long is your mapping cached at the routers and the client?

Route53

- Container for records containing DNS records routing traffic for a specific domain
- I want to use Route 53 to manage the records (Name Server)for vinuai.com
  - Create a hosted zone for vinuai.com in Route 53
- Hosted zones can be
  - private - routing within VPCs
  - public - routing on internet
- Manage the DNS records in a Hosted Zone

Route53 - Standard DNS Records

- A - Name to IPV4 address(es)
- AAAA - Name to IPV6 address(es)
- NS - Name Server containing DNS records
  - I bought vinuai.com from GoDaddy (Domain Registrar)
  - BUT I can use Route 53 as DNS
    - Create NS records on GoDaddy
    - Redirect to Route 53 Name Servers
- CNAME - Name1 to Name2
-

Route53 - Specific Extension - Alias records

- Route traffic to selected AWS resources
  - Elastic Beanstalk environment
  - ELB load balancer
  - Amazon S3 bucket
  - CloudFront distribution

Route53 Routing Policies

Policy	Description
Simple	Maps a domain name to (one or more) IP Addresses
Weighted	Maps a single DNS name to multiple weighted resources 10% to A, 30% to B, 60% to C (useful for canary deployments - **roll out new code/features to a subset of users as an initial test**)
Latency	Choose the option with minimum latency Latency between hosts on the internet can change over time
Failover	Active-passive failover. Primary Health check fails (optional cloud Watch alarm) => DR site is used
Geoproximity	Choose the nearest resource (geographic distance) to your user. Configure a bias.
Multivalue answer	Return multiple healthy records (upto 8) at random You can configure an (optional) health check against every record
Geolocation	Choose based on the location of the user

To add a load balancer DNS name in Route53 follow these steps:

- Log in to your AWS Management Console and navigate to the Route53 dashboard.
- In the left-hand navigation pane, click on "Hosted zones" and select the hosted zone that you want to add the load balancer DNS name to.
- Click on "Create Record Set" button.
- In the "Name" field, enter the subdomain or root domain that you want to associate with your load balancer DNS name. For example, if you want to associate "example.com" with your load balancer, enter "example.com" in the Name field.
- In the "Type" field, select "Alias".
- In the "Alias Target" field, click on the "Alias to Application and Classic Load Balancer" option.
- In the "Load Balancer" dropdown menu, select the load balancer that you want to associate with your DNS name.
- Click on the "Create" button to create the record set.
- Your load balancer DNS name is now associated with your chosen domain name and will route traffic to your load balancer. It may take some time for the changes to propagate across the internet.

godaddy.com

- https://sso.godaddy.com/profile/edit

- Account details and dns name
- pallsm06@gmail.com
- awslearn.live
- Updat the NS details from aws hosted zone to godaddy manage dns

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Create DNS in hosted zone for private network

- Create a hosted zone in private network and DNS name can used internally as below

  - google.com

- map the google.com to A Record in hosted zone
- Create 2 machine , 1 linux server with ami image with html page hosted in it in private Subnet in VPC_A
- 2nd windows machine in public subnet , and connect google.com from windows machine