AWS Route53 Notes

AWS DNS Service (Domain Name System)

- Internet traffic – Public hosted zone - Example (Internet Gateway)
- Internal VPC – Private hosted zone e.g. (NAT gateway)

Uses:

A client is hosting a website a cluster of EC2 instances running in AWS behind an ALB and need a DNS service. You suggested Route53.

1. Client is requesting you to help create a public hosted zone to host this ALB Cname endpoint to customers can access the website using a FQDN (**www.example.com**)

    - Domain Name registration (www.example.com)
    - Route internet/Internal traffic
    - Manage health checks for DNS services

    1. Domain Name registration
        a. www.example.com, www.example.org etc.
    2. Route internet/VPC traffic
        a. Hosted Zone
            i. Multiple records
                1. A Record → IPv4 IP
                2. AAAA Record → IPv6 IP Address
                3. NS → Name Servers
                4. SOA → Start of Authority
                5. MX – Mail exchange
                6. CName → Canonical Name
    3. Health Check for Resource Endpoint e.g IP, DNS name, FQDN
        a. 80 → http
        b. 443 → https
    4. FQDN → Fully Qualified Domain Name

Routing Policies in Route53

- **Simple routing policy** – Use for a single resource that performs a given function for your domain, for example, a web server that serves content for the example.com website.

- **Failover routing policy** – Use when you want to configure active-passive failover.
    - **Example**: We used this policy with disaster recovery implementation when we had a database in us-east-1 and back up on us-east-2

- **Geolocation routing policy** – Use when you want to route traffic based on the location of your users.
    - **Example**: My organization was building a website that target users in US and Asia, I used this policy and deployed web servers in Us data center and a data center in Asia to route traffic to customers based on language

- **Latency routing policy** – Use when you have resources in multiple AWS Regions, and you want to route traffic to the region that provides the best latency.
    - **Example**: My organization was building a website that target users in US and Asia, I used this policy and deployed web servers in Us data center and a data center in Asia to route traffic to customers based on which data center is closest to customer.

- **IP-based routing policy** – Use when you want to route traffic based on the location of your users and have the IP addresses that the traffic originates from.
    - **Example**: When I wanted to route traffic to specific set of user in our on premises data center

- **Weighted routing policy** – Use to route traffic to multiple resources in proportions that you specify.
    - **Example**: I built an application cluster and since I had 2 instances in the cluster, one instance had a larger instance type, I routed 60 percent of traffic to that instance and 40 percent to the lesser instance

- **Multivalue answer routing policy** – Use when you want Route 53 to respond to DNS queries with up to eight healthy records selected at random.

You can read more here

https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-policy.html