Route53

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What is DNS?

Introduction

- DNS service converts human friendly domain names to corresponding IP address.
  - A naming hierarchy for the Internet
  - A directory service to translate (resolve) these names to IP addresses
  - A protocol to perform name resolution.
- You can think of DNS as a phone book for the Internet, helping you look up IP addresses for a specific name.

Introduction

- Route53 is global managed DNS (Domain Name System) & we already know DNS is a collection of rules and records which helps clients understand how to reach a server through URLs.
- DNS operates on port 53. Amazon decided to call it route 53 so that’s where the name comes from.
- It’s a global service. You need to buy a domain in order to work with Route53, Go to Route53 Service & Click on register domain. Enter the domain name & check availability, Add to cart & click on continue.

Route53 Introduction

- Public domain names you own (or buy) or Private domain names that can be resolved by your instances in your VPCs.
- Route53 has many features such as **Load balancing, Health checks, Routing policy like Simple, Failover, Geolocation, Latency, Weighted, Multi value.**
- You pay $0.50 per month per hosted zone.

Types 0f Record

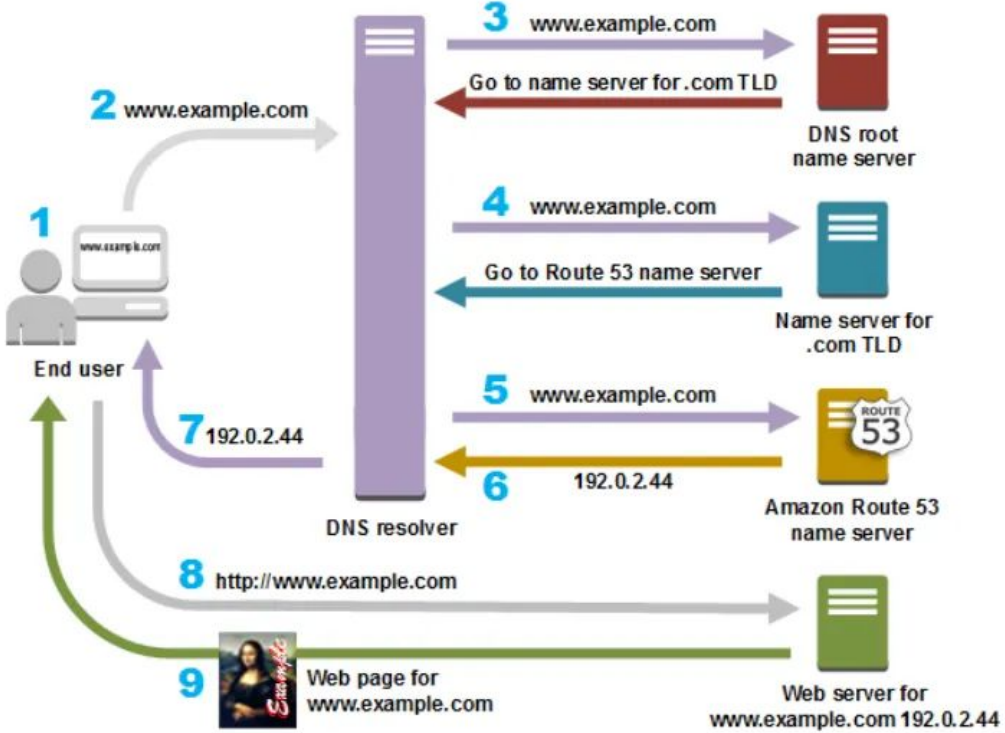
- **A Record —** Maps a domain name to an IPV4 IP address
- **AAAA record —** Maps a domain name to an IPV6 IP address
- **MX record —** Provides the mail servers for a given domain
- **NS record —** Sets the authoritative servers for the domain
- **TXT record —** Some text to validate the domain. This could be used domain ownership verification as well.
- **Alias Record** — An “A” record can be a “Alias” or “Non Alias”. The “Non-Alias” record endpoints are IP addresses. “Alias” records are pointed to AWS specific resources such as Load Balancers, S3 buckets, API Gateway Endpoints, VPC Endpoints and CloudFront distributions.
- **CNAME Record** — CNAME record can only be used for non-ROOT domain names such as www.mydomain.com. Alias can be used foe both ROOT and non-root domains such

A Record

The “A” record stands for Address record. The A record is used by computer to translate the name of the domain to an IP address.

Eg: (http://medium.com might point to http://126.78.98.90)

How DNS Works



Basic Record

When you create basic records, you specify the following values.

- Name
- Type
- Alias
- TTL (Time to Live)
- Value
- Routing Policy

Types of Routing Policy

- Simple
- Weighted
- Latency
- Failover
- Geolocation

Amazon Route 53

You can use Amazon Route 53 to register new domains, transfer existing domains, route traffic for your domains to your AWS and external resources, and monitor the health of your resources.

DNS management

If you already have a domain name, such as example.com, Route 53 can tell the Domain Name System (DNS) where on the Internet to find web servers, mail servers, and other resources for your domain.
Learn More

Get started now

Traffic management

Route 53 traffic flow provides a visual tool that you can use to create and update sophisticated routing policies to route end users to multiple endpoints for your application.
Learn More

Get started now

Availability monitoring

Route 53 can monitor the health and performance of your application as well as your web servers and other resources. Route 53 can also redirect traffic to healthy resources.
Learn More

Get started now

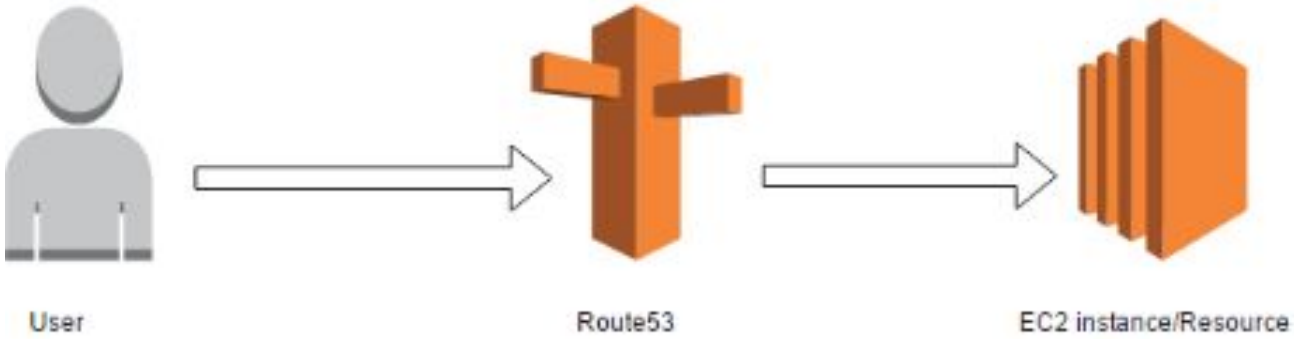
Domain registration

If you need a domain name, you can find an available name and register it by using Route 53. You can also make Route 53 the registrar for existing domains that you registered with other registrars.
Learn More

Get started now

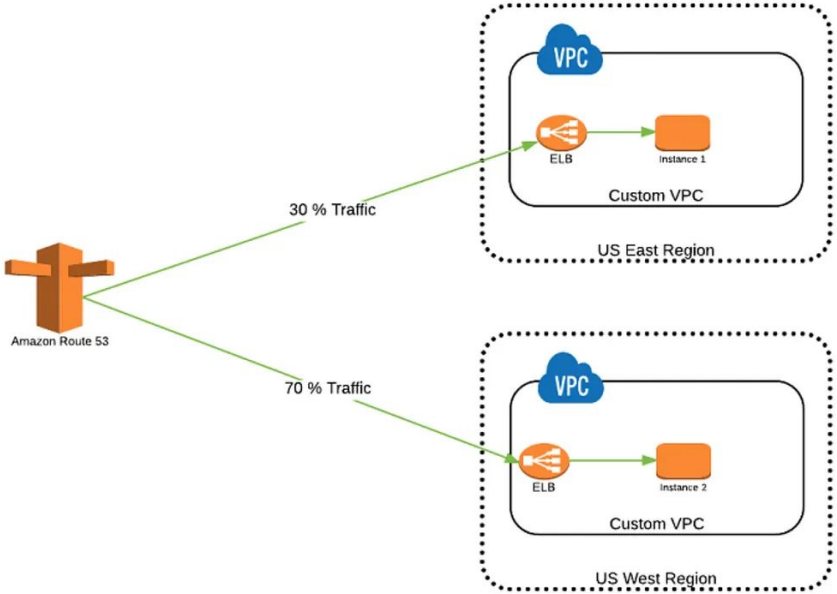
Simple Routing

- you can have only one record with multiple IP addresses.



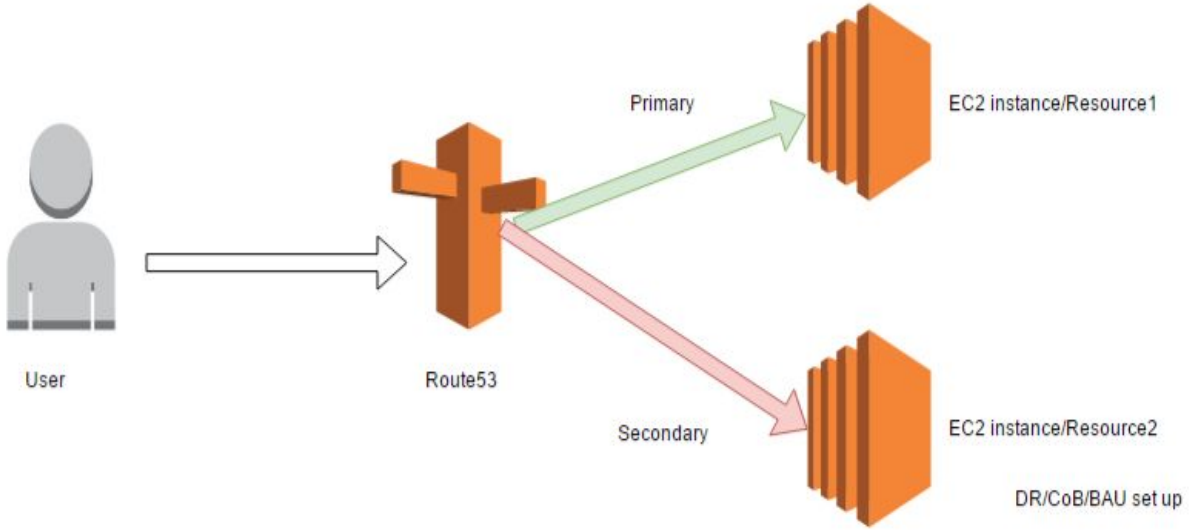
Weighted Routing Policy

- It is also helpful to split traffic between two regions.



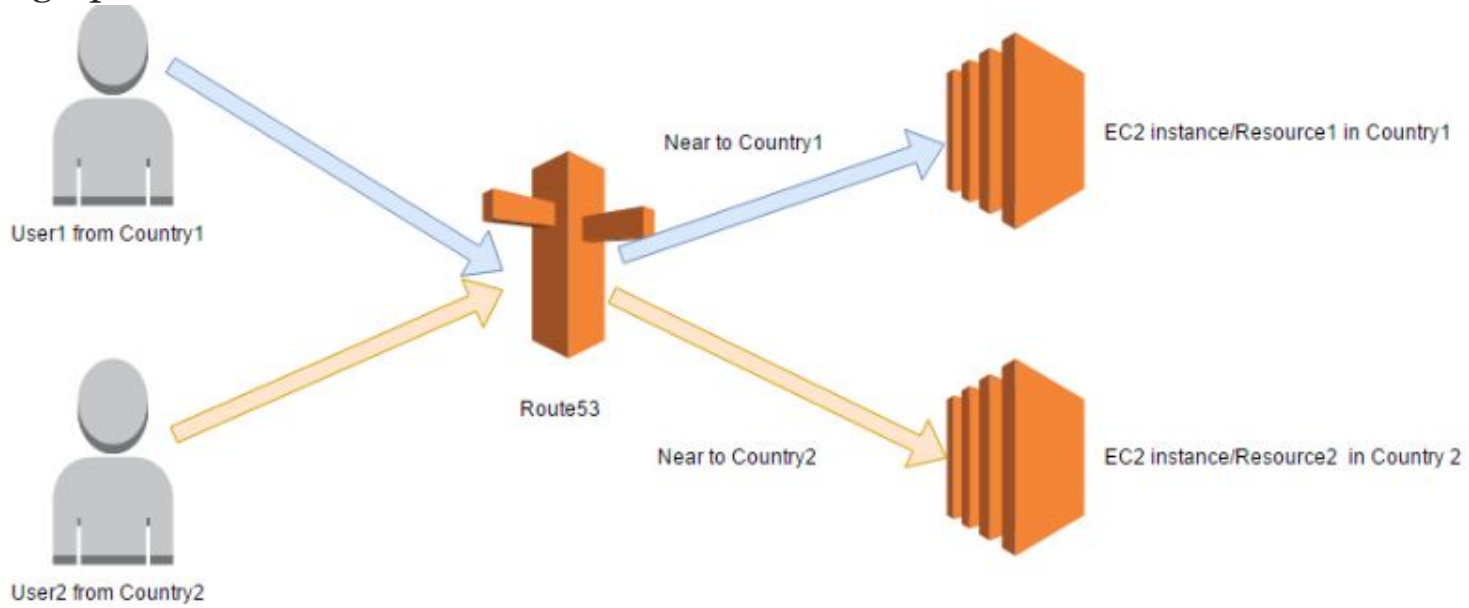
Failover Routing Policy

- **Failover routing** lets you **route** traffic to a resource when the resource is healthy or to a different resource when the first resource is unhealthy.

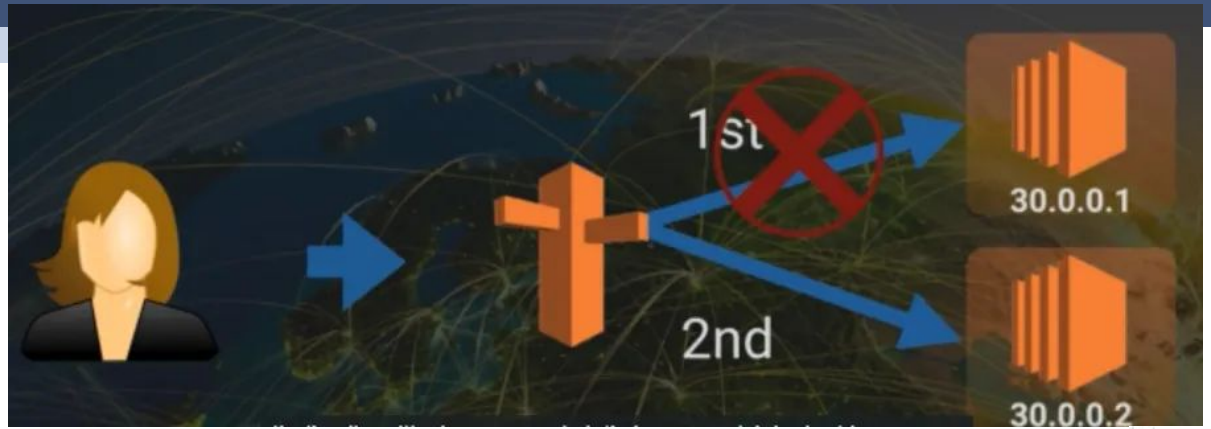


Geo Location Routing Policy

- **Geolocation routing** lets you choose the resources that serve your traffic based on the geographic location



Multi Value Routing Policy



Routing Policy: Multivalue Answer

Route 53 responds to DNS queries with up to eight healthy records selected at random. Learn More

Set ID: Set-1

Description of this record set that is unique within the group of multivalue answer sets.

Example:

Route to Seattle data center

Associate with Health Check: Yes No

THANKS!

Any questions?