Amazon Route 53

CLARUSWAY
WAY TO REINVENT YOURSELF

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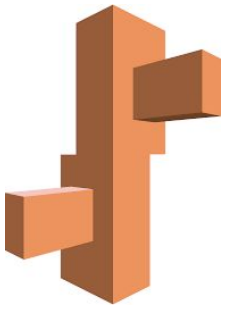
Introduction to Route 53

What is Route 53?



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

- It is designed to translate names like “www.clarusway.com” into the numeric IP addresses like “192.0.2.1” that connect users to Internet applications.

Introduction to Route 53

What does Route 53 used for?

Amazon Route 53 has 3 key functions;

- **Routing**
- **DNS Health Checks**
- **Domain Name Registration.**

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Concepts of Amazon Route 53

Concepts of Amazon Route 53

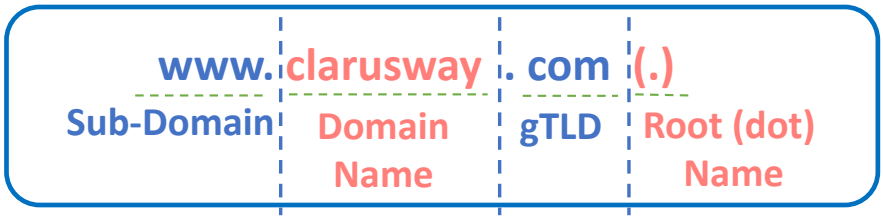
- Domain Name System(DNS)
- Domain Registration
- DNS Routing
- TTL (Time to Live)

Concepts of Amazon Route 53

Domain Name System(DNS)

Concepts of Amazon Route 53

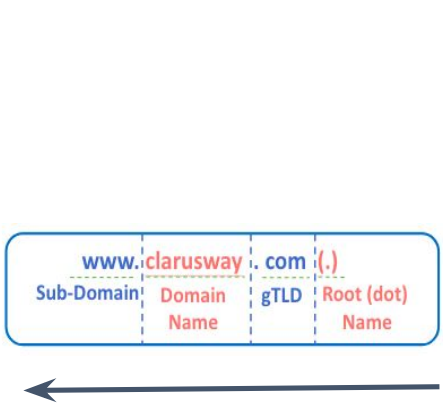
Structure of Domain Name

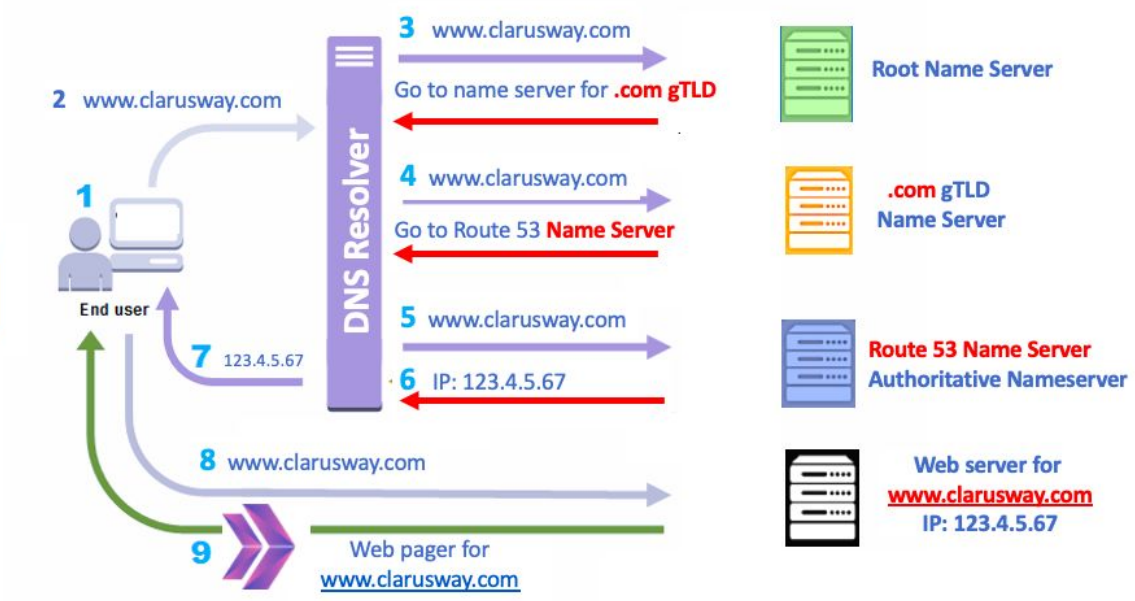


- **Root (dot) Name** represents the beginning of the DNS query and it is not visible.
- **gTLD** stands for Generic Top-Level Domain. The most common TLDs are **com**, **net** and **org**.
- **A Domain Name** is your website name. It represents to name of the firm, organization or foundation, amazon, google, etc.
- **Sub-domains** are commonly used to specify domains for communication purposes, device type, content type, or for other reasons. **www**, **mobile**, **mail, info,** etc.

Concepts of Amazon Route 53

How does DNS work?





*Amazon Route 53 works as an Authoritative Nameserver

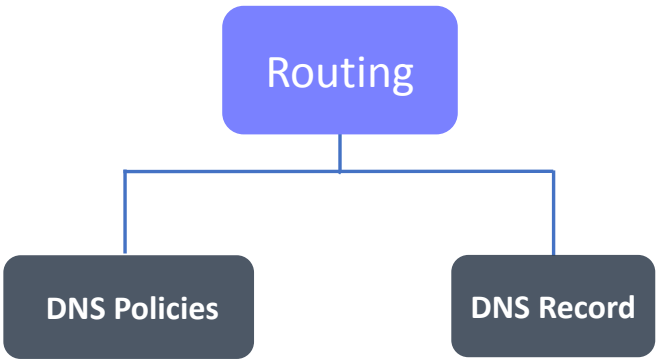
Concepts of Amazon Route 53

Domain Registration

- **A domain name registrar** is a company that allows you to purchase and **register domain names**.
- AWS handles the domain registrar process through the **Amazon Route 53** service.

Concepts of Amazon Route 53

DNS Routing



- Route 53 direct the internet traffic by providing a connection and mapping between your **domain and web server**
- Route 53 routes the web traffic of your domain with the help of the **DNS Record Sets** and **DNS Policies**.

Concepts of Amazon Route 53

TTL (Time to Live)

- TTL(Time to Live) is a parameter that determines how long ISPs (Internet Service Provider) will **cache the DNS record.**
- If the DNS resolver receives a request for the same domain before the TTL expires, **the resolver returns the cached** value.
- It decreases the workload of the name servers.

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Route 53 Components & Solutions

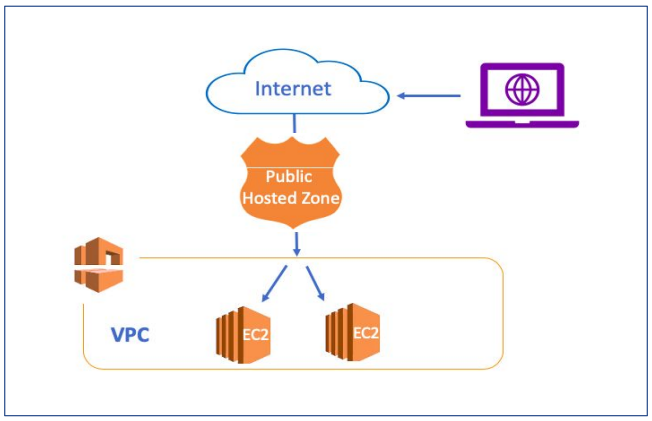
Route 53 Components & Solutions

- Hosted Zones
- DNS Record Sets

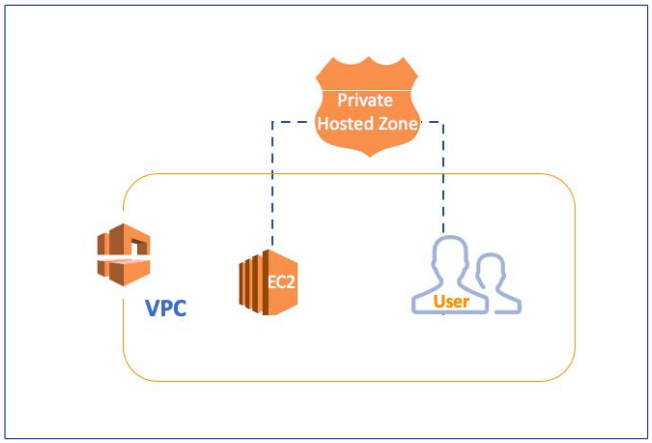
Route 53 Components & Solutions

Hosted Zones

Public Hosted Zone

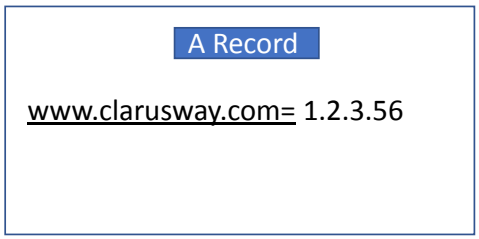


Private Hosted Zone



Route 53 Components & Solutions

DNS Record Sets



- DNS Record Sets are **documents** that help you to manage your domain name.

- Thanks to the DNS record we can associate our web site to the IP(s)

Route 53 Components & Solutions

DNS Record Sets

- NS (Name Server Record)
- SOA (Start of Authority Record)
- A (Address Record)
- CNAME (Canonical Name Record)
- ALIAS(Alias Record)
- PTR (Pointer Record)
- TXT (Text Record)
- CAA (Certification Authority Authorization)
- MX (Mail Exchange Record)
- NAPTR (Name Authority Pointer Record)
- AAAA (IPv6 Address Record)
- SPF (Sender Policy Framework)
- SRV (Service Locator)

Route 53 Components & Solutions

DNS Record Sets

- **SOA (Start Of Authority):** contains administrative basic information about the associated domain.
-
- **NS (Name Server)**: It contains a list of servers authorized to host Name Server.

- These two records are **created automatically** by Route 53 when you register a domain name.

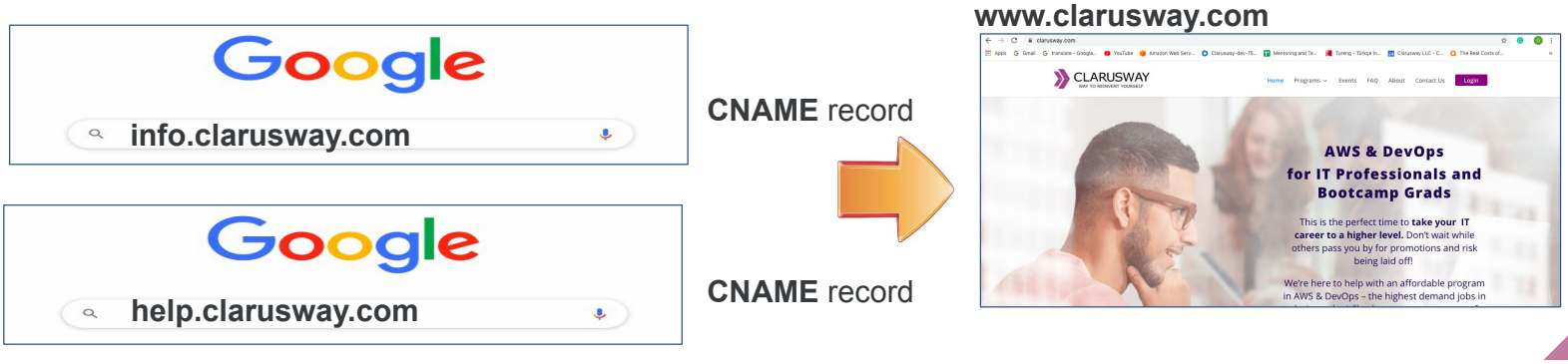
- You are not recommended to add, change, or delete name servers in these records.

Route 53 Components & Solutions

DNS Record Sets- A Records- CNAME Records

- "**A Records**" are used for matching with the domain or subdomain to IPs.

- "**CNAME Records**" are used to point a domain or subdomain to another hostname.



Route 53 Components & Solutions

DNS Record Sets- Alias

- "Alias Records" **mapping to the AWS resources endpoint such as Amazon S3 Buckets.**
- This is a DNS feature of **Route 53 only.**
- Alias records are **not stand-alone record.**

THANKS!

Any questions?

You can find me at:

- @osvaldo
- osvaldo@clarusway.com