Amazon Route 53

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Introduction to Amazon Route 53

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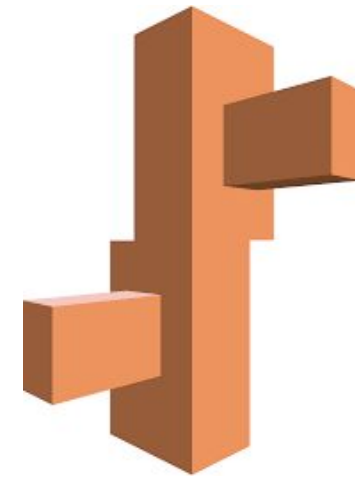WAY TO REINVENT YOURSELF

Introduction to Route 53
What is Route 53?

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

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Introduction to Route 53

What does Route 53 used for?

Amazon Route 53 has 3 key functions;

Route 53

- **Domain Name Registration**
- **DNS Routing**
- **Health Checking**

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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)

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Concepts of Amazon Route 53
Domain Name System(DNS)

172.23.45.9

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Concepts of Amazon Route 53

Structure of Domain Name

www.**clarusway**. **com** **(.)**

| Sub-Domain | Domain Name | gTLD | Root (dot) Name |
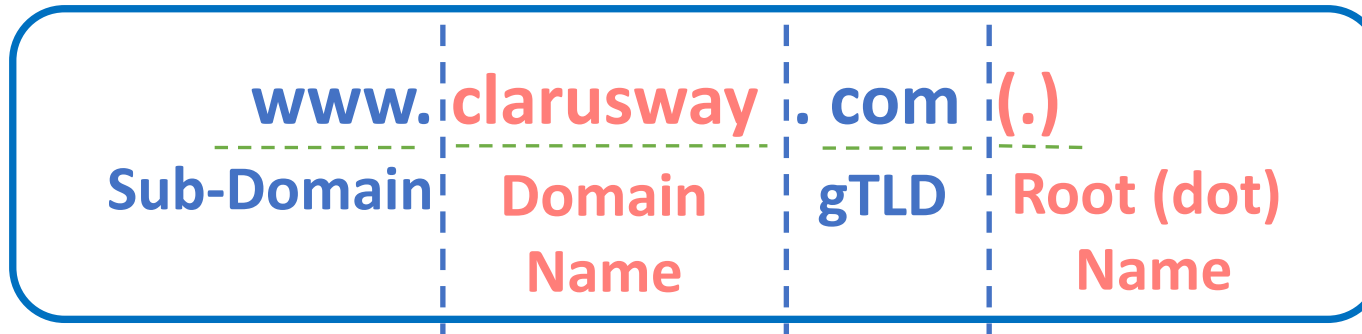
- **Root (dot) Name** represents the beginning of the DNS query and it is not visible.

- **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
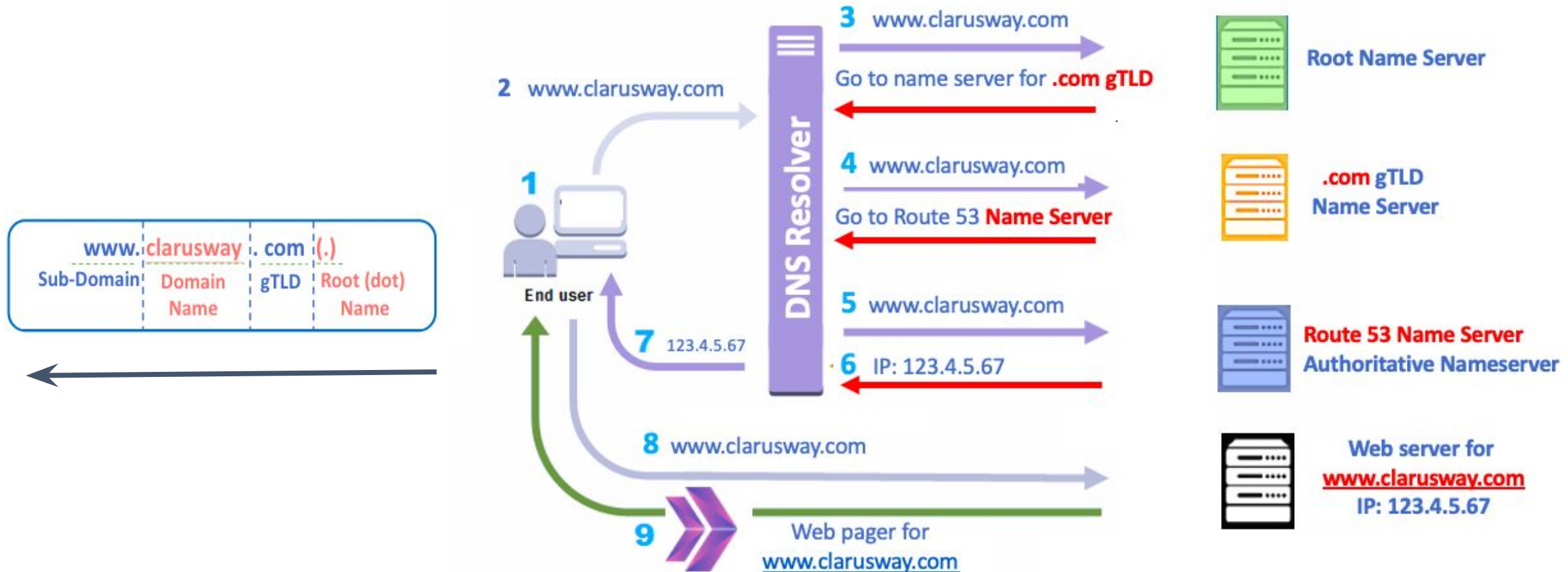
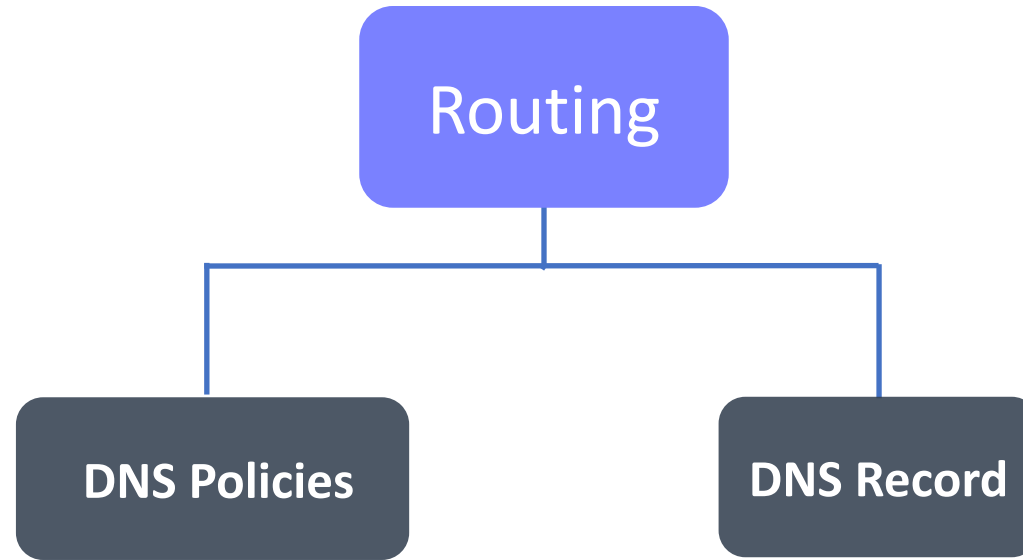# Concepts of Amazon Route 53
Domain Registration

- **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

```
                    Routing
                   /        \
            DNS Policies    DNS Record
```

- 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**.

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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, t**he resolver returns the cached** value.

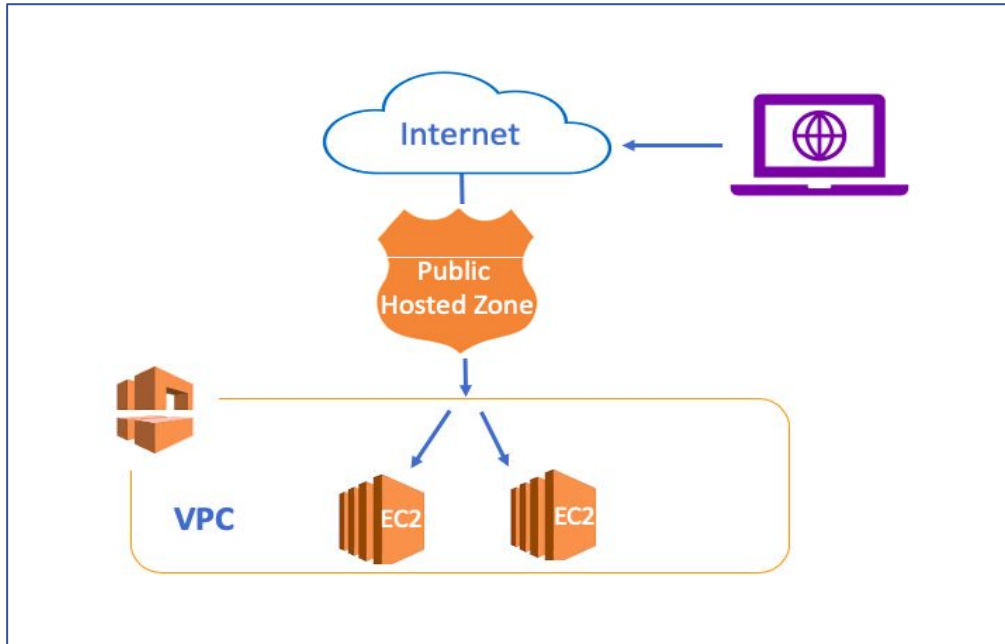- It decreases the workload of the name servers.

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3 Route 53 Components & Solutions

Route 53 Components & Solutions

- Hosted Zones
- DNS Record Sets

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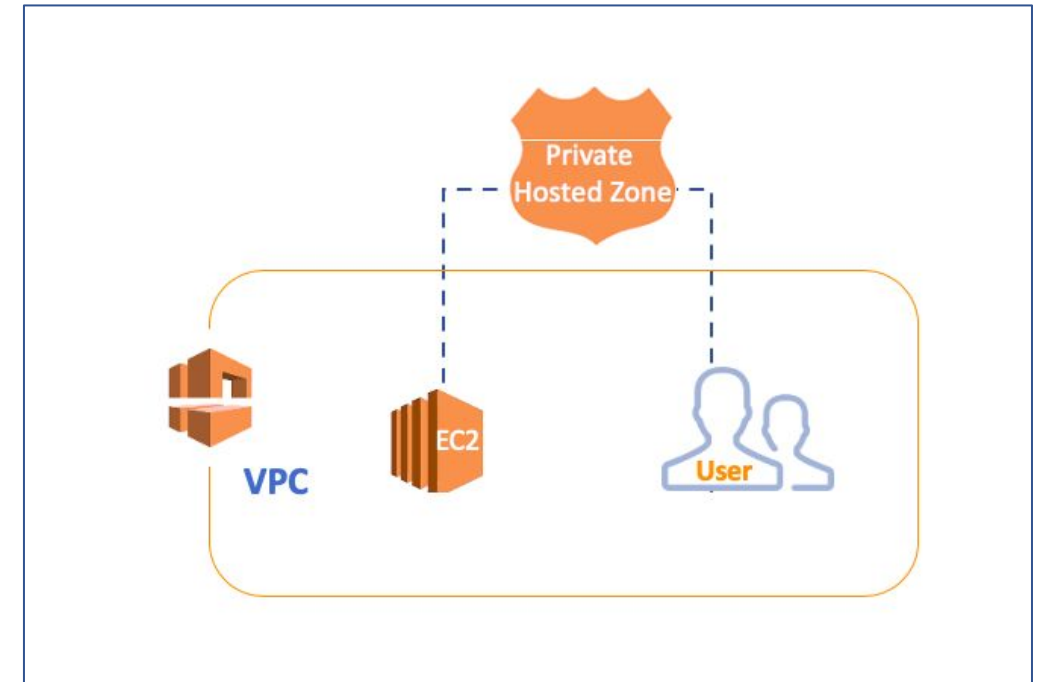WAY TO REINVENT YOURSELF

Route 53 Components & Solutions

Hosted Zones

Public Hosted Zone

Private Hosted Zone

Route 53 Components & Solutions

DNS Record Sets

A Record
www.clarusway.com= 1.2.3.56

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

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

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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.

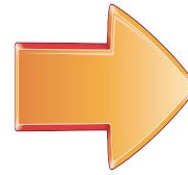- "**CNAME Records**" are used to point a domain or subdomain to another hostname.

CNAME record
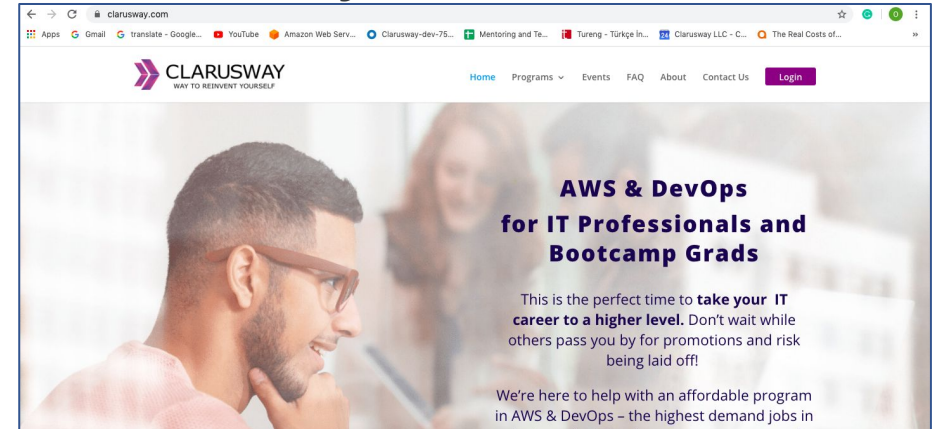
CNAME record

www.clarusway.com

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?