AWS-DEVOPS

DATE	:	13.02.2025
DT/NT	:	DT
LESSON	:	AWS
SUBJECT	:	ROUTE 53-1
BATCH	:	B 303

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Table of Contents

Introduction to Amazon Route 53

Introduction to Amazon 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.techprodevops.com" into the numeric IP addresses like "192.0.2.1" that connect users to Internet applications.

Introduction to Amazon Route 53

What does Route 53 used for?

Amazon Route 53 has 3 key functions;

Route 53 —
- Domain Registration
- Dns Routing
- Dns Health Checks

Route 53

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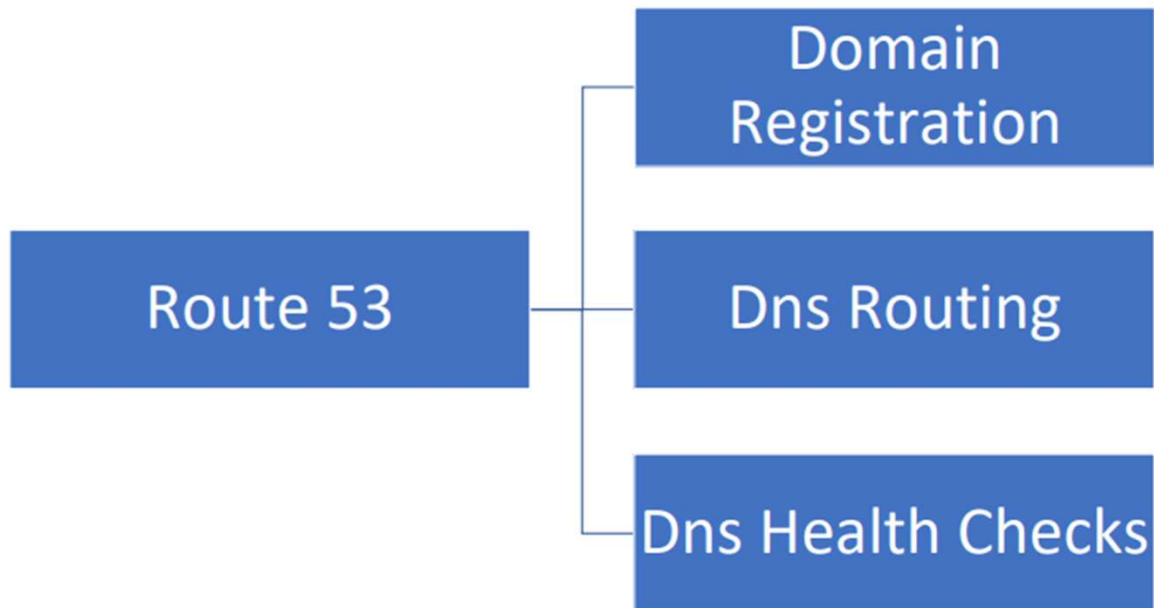
Concepts of Amazon Route 53

Concepts of Amazon Route 53

Domain Name System(DNS)

https://www.techproeducation.com (.)

Sub-Domain Name   Domain Name   TLD   Root(dot) Name

- **Root (dot) Name** represents the beginning of the DNS query and it is not visible.
- **TLD** stands for 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.
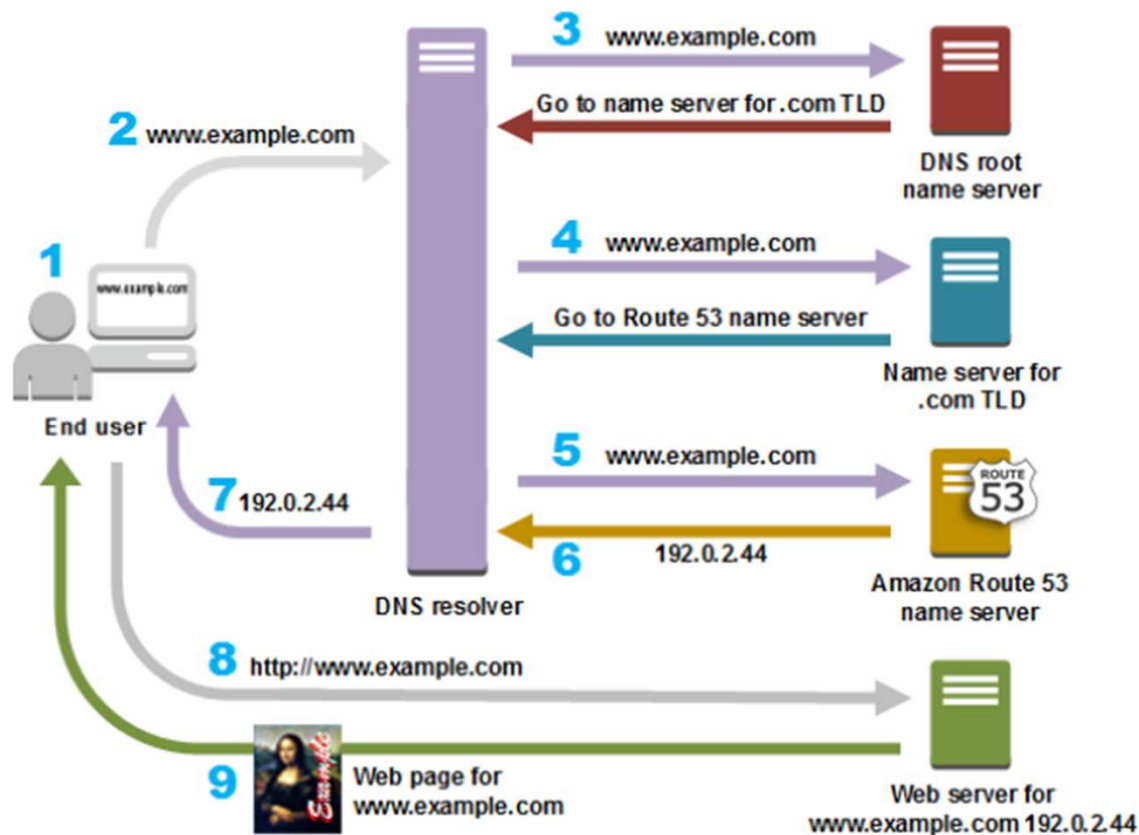
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Concepts of Amazon Route 53

Domain Name System(DNS)

Domain Name- Registered from Route 53 , Godaddy etc.

can not be changed

techprodevops.com

Sub-Domain

can be changed BY OWNER

www.---
help.----
mail.---
fqa.---
osvaldo.----
info.---

www.techprodevops.com
mail.techprodevops.com

Concepts of Amazon Route 53

How does DNS work?
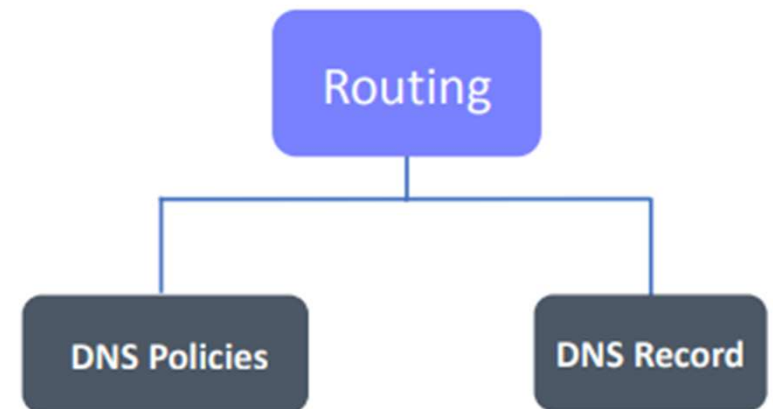
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Domain Registration

• 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**.

Routing

DNS Policies

DNS Record

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.
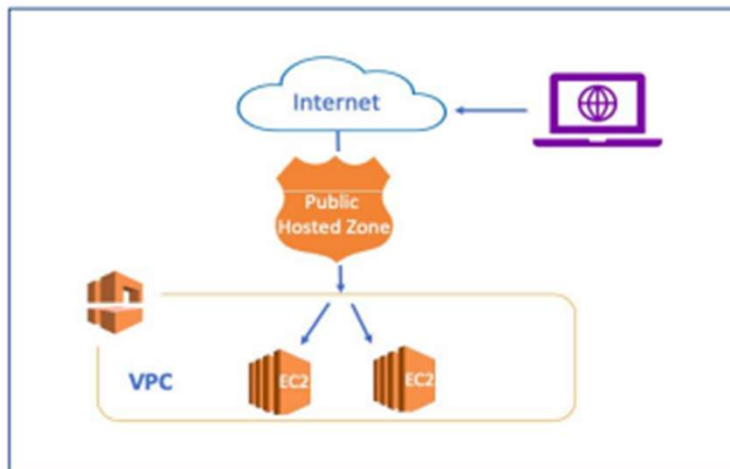
• It decreases the workload of the name servers.

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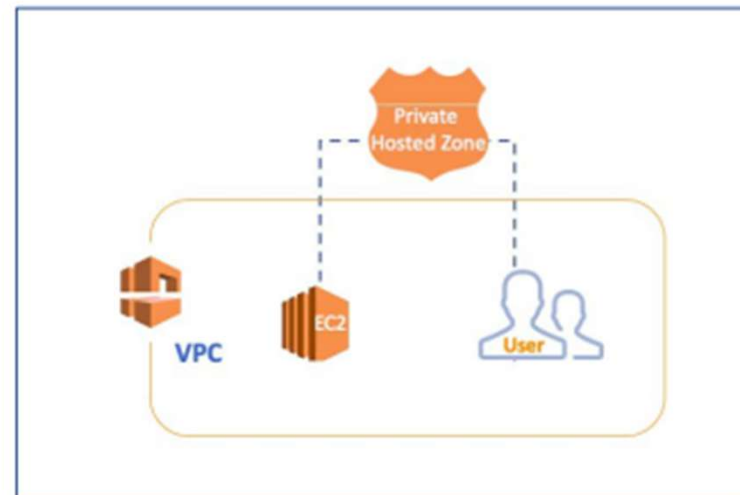# Route 53 Components & Solutions

Route 53 Components & Solutions

Hosted Zones

Route 53 Components & Solutions

DNS Record Sets

www.techprodevops.com= 1.2.3.56

• 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)

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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)

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Route 53 Components & Solutions

DNS Record Sets

• **<u>SOA (Start Of Authority):</u>** contains administrative basic information about the associated domain.

• **<u>NS (Name Server):</u>** 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"** are used for matching with the domain or subdomain to IPs.

- **"CNAME Records"** are used to point a domain or subdomain to another hostname.
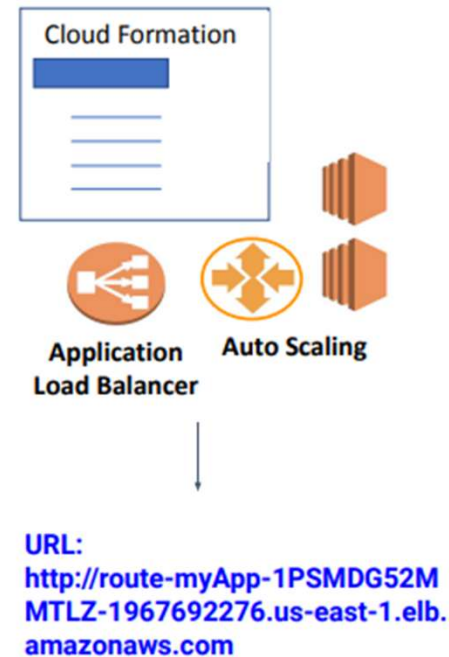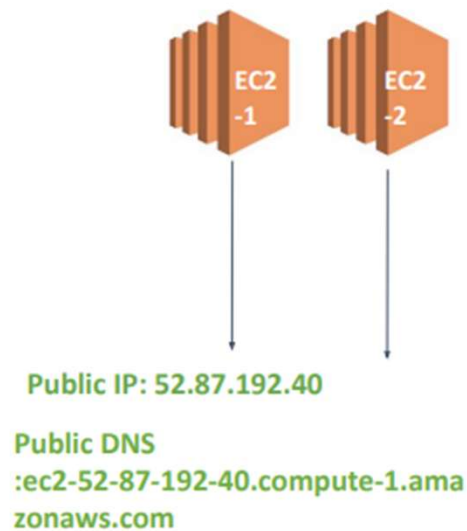
Route 53 Components & Solutions

DNS Record Sets

• **"Alias 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.

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Route 53 Components & Solutions

DNS Record Sets

Server Option and Their Outputs

EC2 -1   EC2 -2

Public IP: 52.87.192.40

Public DNS
:ec2-52-87-192-40.compute-1.ama
zonaws.com

http://info.awsdevopsteam.net.
s3-website-us-east-1.amazonaw
s.com

Cloud Formation

Application Load Balancer   **Auto Scaling**

URL:
http://route-myApp-1PSMDG52M
MTLZ-1967692276.us-east-1.elb.
amazonaws.com

Route 53 Components & Solutions

DNS Record Sets

- Public IP: 52.87.192.40

- Public DNS :ec2-52-87-192-40.compute-1.amazonaws.com

- http://info.awsdevopsteam.net.s3-website-us-east-1.amazonaws.com

Not Human readable

Amazon Route 53

Route 53 Components & Solutions

DNS Record Sets

What does Route 53 do?

Buy and Register a Domain	Create Domain **Variations** via Sub Domains	**Mapping** **Value**	**Value** **Type**	**Record Type**
awsdevopsteam.net (naked domain)	**xxxx**.awsdevopsteam.net	👉 Point out	• IP of Server 1.2.3.4.5 • Domain Name www.xxxxx.com • End point S3 Bucket url Load Balancer	➡️ A AAA CNAME ➡️ Alias

Value type determines the record type

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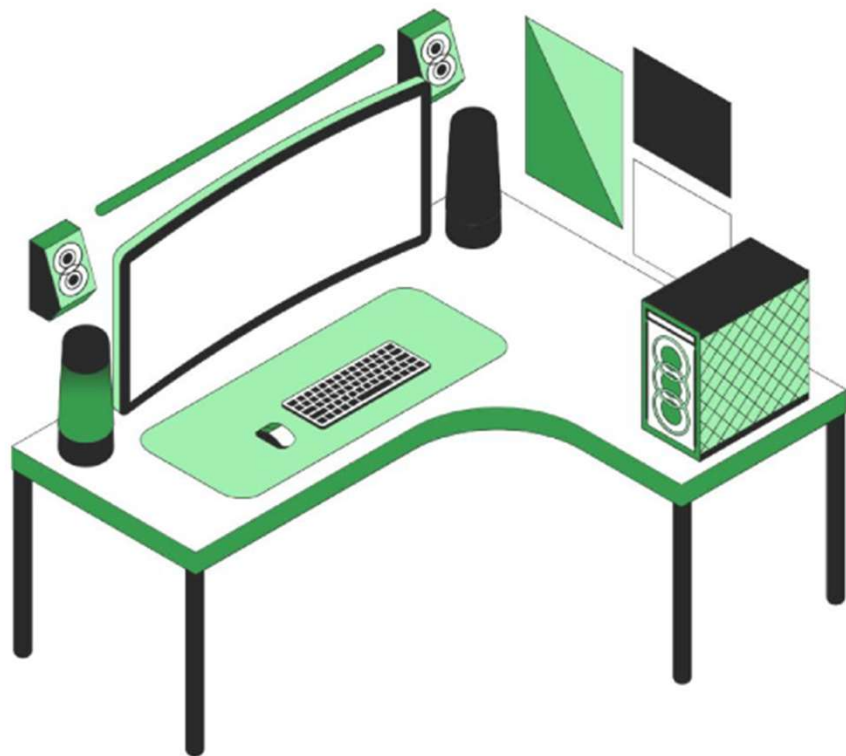
Do you have any questions?

Send it to us! We hope you learned something new.

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