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# Route53:

## Route 53 Functions

1. DNS Management (Domain to IP Conversion/mapping) ---Generic Level & Geographic level Domain

2. Traffic Management (Route Traffic)

3. Availability management (Health Check of the Active Server)

4. Domain Registration (New, Domain transfer)

1. It create automatically hosted zone (which is having all related information about resources and hosted zone name same as domain name)
2. Four unique name server generated
3. Route 53 is global service so not region specific
4. It is supporting Ipv6
5. Aws support generic top level (.com,.org,.net) & geographic top level domain (.in, .us,. uk)

## Steps:

1. Register the domain and connect the domain name to the route53 hosted zone called delegation
2. Inside hosted zone need to create record set
3. Hosted zone : collection of record for specified domain
4. Hosted zone can be public hosted zone and private hosted zone
5. For each hosted zone aws create 4 name server and a start of authority (SOA) record. Don’t change it .

A Record – Address record --- Domain name to IP address

Domain name IN A 192.168.101.67

AAAA Records – Ipv6 Address Record

Domain name IN AAAA 64:0000.0000.123

Cname- Canonical name record…alternative name or alias of domain name

Web IN CNAME abc.com

SOA – Start of authority Record

It is only one record, Owner information, Serial number, Refresh time and ttl time to live

## Routing Policies

1. AWS Route53 support 7 routing policies
2. Simple Routing (Default)
3. Failover Routing
4. Geo-location Routing
5. Multi Value Routing
6. Latency based routing
7. Weighted Routing
8. Geo-proximity routing

# VPC – Virtual Private Cloud

1. VPC is created on region
2. Default flow for VPC

Create VPC --->

Subnet Creation ----->

InternetGw Creation ----> associate VPC --->

Routing Table Creation----> Associate subnet ---->edit route ----> add route

1. VPC Peering is used to join to different VPC belong to same region or different region

Create peering connection--->add source/destination vpc detail--->send peering request

Destination side accept peering request --->

Add CIDR which need to allowed at routing table in opposite side routing table 🡪

1. Network ACL is used to create firewall rules at subnet level
2. Security group is used to create firewall rule at Instance level
3. Nat GW is used to share internet access to Private subnet Instance
4. We can create Max 5 VPC per region by default and create 200 Subnet per VPC
5. One subnet will be added to one VPC only at a time

