Aws route 53

You can use amazon route 53 to regular new domains transfer existing domains route traffic for your domains to your domains to your AWS and external resources and monitor the health o your resource

Route 53 functions

1. DNS Management
2. Traffic management
3. Availability monitoring
4. Domain registration

Route 53 perform three main functions

1. Register a domain
2. As a DNS it routes internet traffic to the resources for your domain
3. Check the health of your resources

\*route 53 sends automated requests over the internet to a resource (can be a webserver )to verify that the server is reachable, functional or available

\*also you can choose to receive notification when a resource becomes unavailable and choose to route internet traffic okay from unhealthy resources

\*you can we route 53 for any combination of these function :-

\*for ex. You can use route 53 both to regular your domain name and to route internet traffic for the domain

\*or you can we route 53 to route internet traffic for a domain that you registered with another domain register

When you register a domain with route 53 the service automatically makes itself the DNS service for the domain by doing the following

* It create a hosted zone that has the same name as your domain
* It assigns a set of your name server to the hosted zone unique to the account
* Hen someone uses a browser to access your website, these name servers inform the browser where to find your resources, such as a web server or an amazon s3 bucket
* It gets the name servers form the hasted zone and adds then to the domain

AWS supports:

1. Generic top load domains
2. Geographic top level domains

Registering a domain with route 53

* You can register a domain with route 53 if the TLD is included on the supported TLD list
* If the TLD is not included you can’t register the domain with route

Using route -53 as your service

* You can use route 53 as the DNS service for any domain even if the TLD for the domain is not included on the supported TLD list

NOTE:\_ each amazon route 53 account is limited to a maximum of 500 hosted zones and 10000 resources record sets per hosted zone you can increase this limit by requesting to AWS

STEPS TO CONFIGURE ROUTE-S3

1. You need to register a domain this can be route 53 or another DNS register but then you connect your domain name in that register to route 53
2. Create hosted zone on route 53 this is clone automatically if you registred your domain using route 53

* Inside the hosted zone you need to create record sets

Delegate to route 53

* This step connects everything and make it works
* Connect the domain name to the route 53 hosted zone this is called delegation
* Update your domain register with the correct name server for your route 53 hosted zone
* No other customer hosted zone will share this delegation set with your
* Doing this means route 53 DNS service will be sowing DNS traffic for the domain of the hosted zone
* If you registered your domain with a diff registor you need to configure the route 53 NS server list In your register DNS databases for your domain

If you are using another domain provider and you did all the changes

* When you migrate form one DNS provider to anther, for an existing domain this change can take upto 48 hours to be effective
* This is because name server DNS record are typically cached across the DNS system glotally on the internet for upto 48 hours (TTL) periods

Transfering a domain to route 53

* You can transfer a domain to route 53 if the TLD is included on the following list
* If the TLD is not included you can’t transfer the domain to route 53
* For most TLD you nedd to get an authorization code form the current register to transfer a domain

Servers :\_ difference between route

Recursive DNS

Authoritative DNS sever

Root domain server

Name server

* **Route 53 hosted zone**
* A route 53 hosted zone is a collection of records for a specific domain
* You create a hosted zone for a domain and then you create records to tell the domain name system how you want traffic to be routed for that domain
* Basically a hosted zone is a container that holds information about has your want to route traffic for a domain and its subdomains
* You can create public (internet) hosted zones or private ( internal DNS) hosted zones
* For each public hosted zone that you create, amazon route 53 automatically create a name server (NS) record and a start of authority (SOA) record don’t change these records
* Route 53 automatically create a name server (NS) record with the same name as your hosted zone
* It list the four name servers that are the authoritative name servers for your hosted zone
* Do not add thane or delete some server in this record
* When you create a hosted zone amazon route 53 automatically create a name server (ns) record and a start of authority record (SOA) for the zone
* The NS record identifies identifies the four name servers that you give to your register or your DNS server so that DNS queries are rated to route 53 name servers
* By default route 53 assigns unique set of four name server (know collectivity as a delegation set) to each hosted zone that

Ex. Ns -1337 aws dns-39 com

Ns-895 awsdns-47 net

NS-428 AWSDNS-53 org

Ns-1597 awsdns- 07 co uk

* **Route 53 as your authoritative DNS**
* Once you update the route 53 NS setting with your domains registar to include the route 53 name server , route 53 will be responsible to respond to DNS queries for the hosted zone
* This is true whether you do have a functioning website or not
* Route 53 will respond with information about the hosted zone wherever someone types the associated domain name in web browser
* You can create more than one hosted zone with the same name and add different records to each hosted zone
* Route 53 assigns four name servers to every hosted zone
* The name servers are different for each of them
* When you update your registers name servers records be careful to use the route 53 name servers for the correct hosted zone the one that contains the records that you want route 53 to use when responding to for your domain
* Route 53 name returns values for records in other hosted zone that have the same home
* **Route 53 hosted zone default entries**

Inside the hosted zone by default you have two entries

**NS Entry:-** contains the unique sets of name servers for this hosted zone

**SOA Entry:-** contains information about the hosted zone

Part -4

If you are currently using another DNS service and you want to migrate to amazon route 53

Start by creating a hosted zone

Route 53 automatically assigns the delegations sets the four name servers to your hosted one

To ensure that the dns routes queries for your domain to the route 53 name servers

Update your registras or your DNS services NS records for the domain to replace the current name servers with the names of the four route 53 name servers for your hosted zone

The method that you use to update the NS records depend on which registar DNS service you using

Same registar only allow yo do specify name servers using IP address they don’t allow you to specify fully qualified domain names

If you register requires using ip addresses you can get the ip address for your name servers using the dig utility (for mac, linux) and nslookup (for windows)

* **Transferring a domain between accounts within AWS**

Transferring a domain to a different AWS account

If you registered a domain using one AWS account and you want to transfer the domain to another AWS account , you can do so by contacting the AWS support center and requesing the transfer

Migrating a hosted zone to a different AWS account

If you are using route 53 as the DNS service rfor the domain route 53 does not transfer the hosted zone when you transfer a domain to a different AWS account

If domain registration is associated with one account and the corresponding hosed zone is associated with another account, neither domain regulration nor DNS funcrionality is affected

The only effect is that you will need to sign into the route 53 console using one account to see the domin and sign-in using the other account to see the hosted zone

* **Supported DNS record types by route 53**

1. A – record:- address record – maps domain name to ip address

[www.techquftugu.com](http://www.techquftugu.com) IN A 5.5.5.5

1. A A A A Record:- ipv6 address record maps domain name to an ipv6 address

[www.techgufgu.com](http://www.techgufgu.com) in A A A A 2002 b768

1. CNAME record :- Maps an alias to a hostame

* Web IN CNAME [www.techguftgu.com](http://www.techguftgu.com)

1. NS record :- name server record -used for delegating zone to a nameserver

* Techgugugu.com IN NS NSI.techgufgu.com

1. SOA record :- start of authority record
2. MX record :- mail exchange – defines where to deliver mail for user@ domain name

-techgugutgu.com IN MX 10 mailtail tech .gutugu.com

NS records define which name server is a autoriatative to a particular zone or domain name and point you to other DNS server

A/AAAA are called host records like business card

CNAME is an alternative record or an alias for anther records

Helpful in redirection of if you want to hide details about your actual servers from the users