

💡 AWS Route 53 DNS Service

AWS Route 53 is one of the most well-known, reliable, and cost-effective services for managing and maintaining domains to perform Domain registration, [#dns](#) routing, and Health checking.

It is a scalable (DNS) service that provides a reliable way to redirect traffic to applications. To achieve this [#domainnames](#) are translated to IP addresses to help computers connect better.

🔥 Domain Registration

This function is used to register a name to the website or web application called domain name, such as [example.com](#).

🔥 DNS Routing

When a user opens a browser and enter [example.com](#) in the address bar, [#route53](#) helps connect the browser with the website or web application.

🔥 Health Checking

This function will allow users to receive notifications when a resource becomes unavailable and choose to route [#internet](#) traffic away from unhealthy resources, also to verify a web server is functional, reachable and available.

🔥 Control and Data Plane

Control plane enables to perform management [#operations](#) such as creating, updating, and deleting resources. Data plane provides the service's core [#functionality](#).

🔥 Components

- Records - Created to route internet traffic to the [#resources](#).
- Hosted Zones - It is a collection of records that contains information about how to route traffic of its domains and all of its subdomains.
- DNS query - It is a [#request](#) for information sent from DNS client to the DNS [#server](#).
- DNS failover - whenever a [#failure](#) is detected, method for routing the traffic from unhealthy resources to healthy resources.
- Routing policy - Routing policy determines how Amazon Route53 responds to the [#queries](#).

🔥 Benefits

- High Availability - DNS servers are distributed across many availability zones, which helps in routing [#endusers](#) to use websites upon their availability.
- Scalability - It is designed to automatically [#scaleup](#) or down when the volume size varies.
- Secure - Able to create and grant permissions to each and every user and mention who has [#access](#) to which parts of the service.
- Flexible - We can decide which [#policy](#) we want to use at a given time.
- Easy to use - Very user-friendly and easy to [#configure](#) DNS settings.