AWS ROUTE53

Amazon Route 53 is a scalable and highly available Domain Name System (DNS) web service designed to give developers and businesses a reliable way to route end users to Internet applications by translating domain names into IP addresses.

CREATING A PUBLIC HOSTED ZONES: -

public hosted zone is a container that holds information about how you want to route traffic on the internet for a specific domain, such as example.com, and its subdomains (acme.example.com, zenith.example.com). After you create a hosted zone, you create records that specify how you want to route traffic for the domain and subdomains.

TO CREATE A PUBLIC HOSTED ZONE USING THE ROUTE 53 CONSOLE: -

1. Sign in to the AWS Management Console and open the Route 53 console at https://console.aws.amazon.com/route53/.
2. If you're new to Route 53, choose Get started under DNS management.

   If you're already using Route 53, choose Hosted zones in the navigation pane.
3. Choose Create hosted zone.
4. In the Create Hosted Zone pane, enter the name of the domain that you want to route traffic for. You can also optionally enter a comment.

   For information about how to specify characters other than a-z, 0-9, and - (hyphen) and how to specify internationalized domain names, see DNS domain name format.
5. For Type, accept the default value of Public Hosted Zone.
6. Choose Create.
7. Create records that specify how you want to route traffic for the domain and subdomains. For more information, see Working with records.
8. To use records in the new hosted zone to route traffic for your domain, see the applicable topic:
   - If you're making Route 53 the DNS service for a domain that is registered with another domain registrar, see Making Amazon Route 53 the DNS service for an existing domain.

- If the domain is registered with Route 53, see [Adding or changing name servers and glue records for a domain](#).

HOSTING A WEBSITE IN ROUTE53: -

Hosting a website using Amazon Route 53 involves several steps, including setting up a hosted zone, configuring DNS records, and pointing your domain to an Amazon Web Services (AWS) resource like an Amazon S3 bucket or an EC2 instance.

Prerequisites: -

AWS Account: Ensure you have an AWS account. Sign up here.

Domain Name: Either register a new domain via Route 53 or use an existing one.

Website Content: Ensure your website content is ready and hosted on an S3 bucket, EC2 instance, or another server.

Here's a step-by-step for hosting a website in Route53:

Step 1: Create an S3 Bucket (Static Website Hosting).

Step 2: Set S3 Bucket Permissions.

Step 3: Create a Hosted Zone in Route 53.

Step 4: Configure DNS Records.

Step 5: Update Domain Registrar.

Step 6: Verification.

UNDERSTANDING THE ROUTING POLICIES IN ROUTE53: -

1. Simple Routing Policy.
2. Weighted Routing Policy.
3. Latency Routing Policy.
4. Failover Routing Policy.
5. Geolocation Routing Policy.
6. Geoproximity Routing Policy (Traffic Flow Only).
7. Multi-Value Answer Routing Policy.

WEIGHTED ROUTING POLICIES: -

Use Case: Distribute traffic across multiple resources in specified proportions (weights). Useful fsor load balancing or testing new versions of applications.

Behavior: Route 53 routes traffic to different resources based on assigned weights.

Configuration: Specify multiple records with the same name and type, assign a weight to each record. For example, if you have two servers and assign a weight of 60 to one and 40 to another, Route 53 sends 60% of traffic to the first server and 40% to the second.

SIMPLE ROUTING POLICIES: -

Use Case: Basic use cases with a single resource, such as a single web server or an Amazon S3 bucket.

Behavior: Route 53 returns one of the values associated with the record, such as an IP address.

Configuration: Create a single record without any special configuration.

FAILOVER ROUTING POLICIES: -

Use Case: Ensure high availability by routing traffic to a primary resource unless it becomes unavailable, in which case traffic is routed to a secondary resource.

Behavior: Route 53 routes traffic to a primary resource, and if a health check determines it is unhealthy, it fails over to a secondary resource.

Configuration: Create a primary and a secondary record and associate health checks with the primary resource.