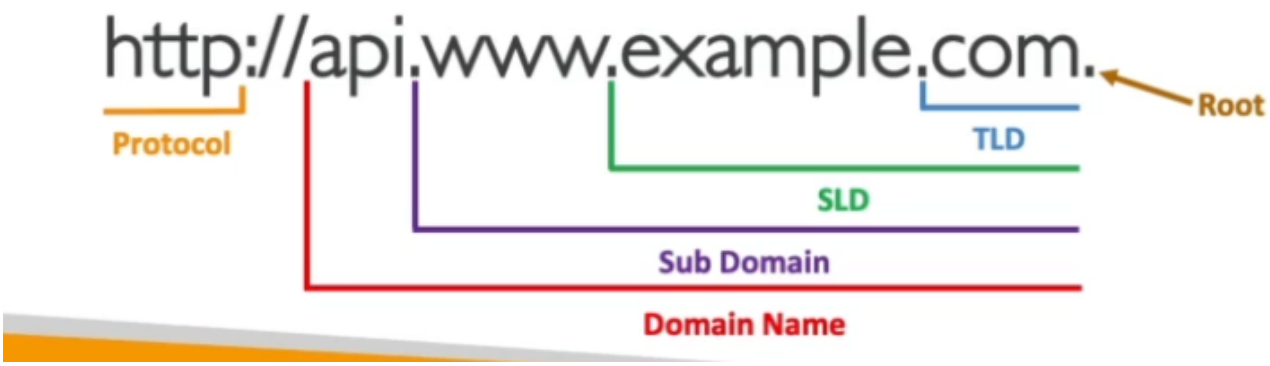
Ruote 53

DNS Terminology



Ruote 53 Record Types

A

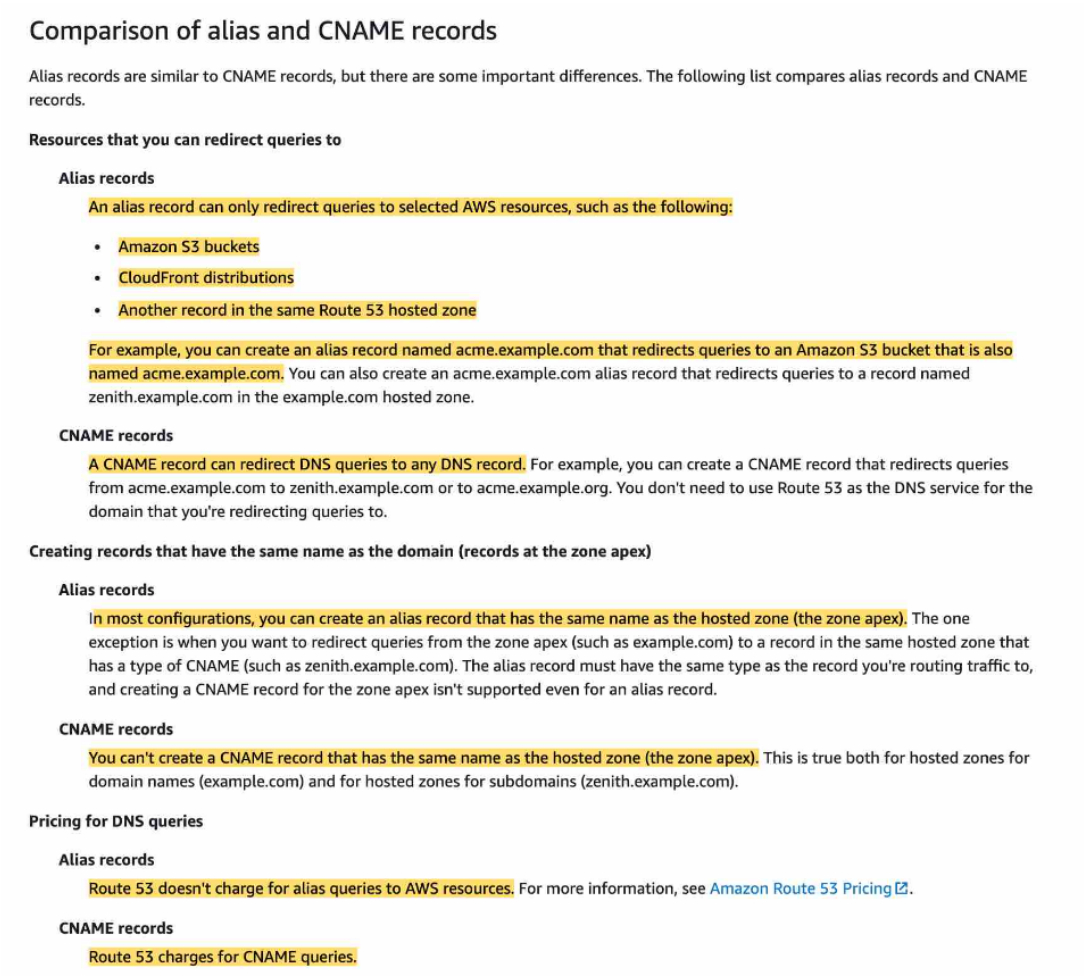
- You use an A record to route traffic to a resource, such as a web server, using an IPv4 address in dotted decimal notation.
- Example for the Amazon Route 53 console : `192.0.2.1`

AAA

- You use an AAAA record to route traffic to a resource, such as a web server, using an IPv6 address in colon-separated hexadecimal format.
- Example for the Amazon Route 53 console: `2001:0db8:85a3:0:0:8a2e:0370:7334`

CNAME

- A CNAME record maps DNS queries for the name of the current record, such as acme.example.com, to another domain (example.com or example.net) or subdomain (acme.example.com or zenith.example.org).
- DNS protocol does not allow you to create a CNAME record for the top node of a DNS namespace, also known as the zone apex. For example, if you register the DNS name example.com, the zone apex is example.com. You cannot create a CNAME record for example.com, but you can create CNAME records for www.example.com, newproduct.example.com, and so on.

- 

Comparison of alias and CNAME records

Alias records are similar to CNAME records, but there are some important differences. The following list compares alias records and CNAME records.

Resources that you can redirect queries to

Alias records

An alias record can only redirect queries to selected AWS resources, such as the following:

- Amazon S3 buckets
- CloudFront distributions
- Another record in the same Route 53 hosted zone

For example, you can create an alias record named acme.example.com that redirects queries to an Amazon S3 bucket that is also named acme.example.com. You can also create an acme.example.com alias record that redirects queries to a record named zenith.example.com in the example.com hosted zone.

CNAME records

A CNAME record can redirect DNS queries to any DNS record. For example, you can create a CNAME record that redirects queries from acme.example.com to zenith.example.com or to acme.example.org. You don't need to use Route 53 as the DNS service for the domain that you're redirecting queries to.

Creating records that have the same name as the domain (records at the zone apex)

Alias records

In most configurations, you can create an alias record that has the same name as the hosted zone (the zone apex). The one exception is when you want to redirect queries from the zone apex (such as example.com) to a record in the same hosted zone that has a type of CNAME (such as zenith.example.com). The alias record must have the same type as the record you're routing traffic to, and creating a CNAME record for the zone apex isn't supported even for an alias record.

CNAME records

You can't create a CNAME record that has the same name as the hosted zone (the zone apex). This is true both for hosted zones for domain names (example.com) and for hosted zones for subdomains (zenith.example.com).

Pricing for DNS queries

Alias records

Route 53 doesn't charge for alias queries to AWS resources. For more information, see Amazon Route 53 Pricing.

CNAME records

Route 53 charges for CNAME queries.

NS record Type

- Name server for Hosted Zone

Ruoting Policy

Simple

- Use for a single resource that performs a given function for your domain, for example, a web server that serves content for the example.com website.
- You can use simple routing to create records in a private hosted zone.
- Cannot be associated with health check
- if multiple values are returned a random on is choosen by the client

Wighted

- Use to route traffic to multiple resources in proportions that you specify. You can use weighted routing to create records in a private hosted zone.
- Assign weight of 0 to stop sending taffic to that resource

Latency based

- Use when you have resources in multiple AWS Regions and you want to route traffic to the region that provides the best latency. You can use latency routing to create records in a private hosted zone.

Geolocation

- Use when you want to route traffic based on the location of your users. You can use geolocation routing to create records in a private hosted zone.

Geoproximity

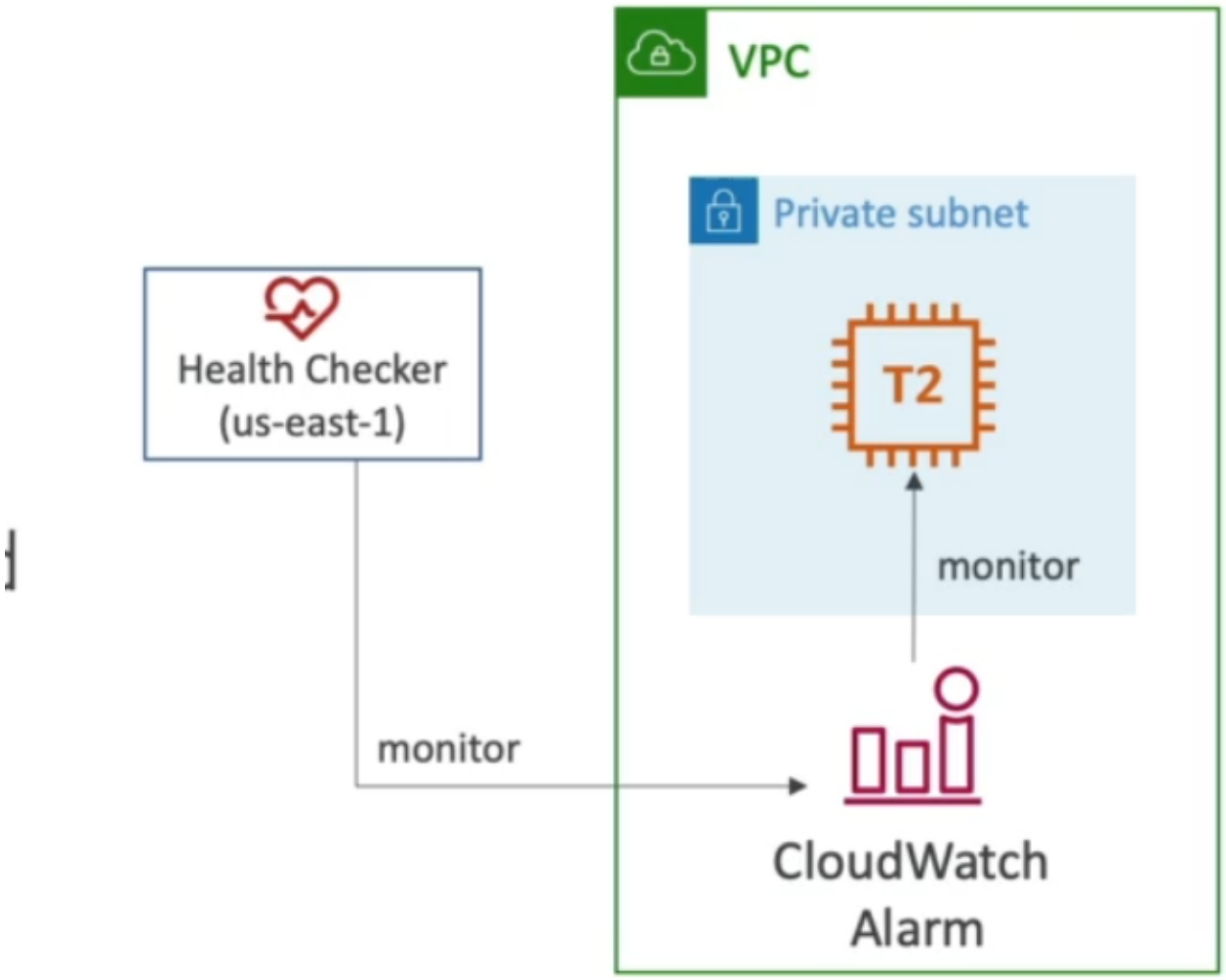
- Use when you want to route traffic based on the location of your resources and, optionally, shift traffic from resources in one location to resources in another.
- to shift more traffic to resource based on the bias

Ruote 53 Multi Value

- Use Multi Value answer routing policy when you want Route 53 to respond to DNS queries with up to eight healthy records selected at random.
- Route 53 does not help in scaling your application.

Health check - Private Hosted Zone

- Ruote 53 Health checker are outside the VPC. They cannot access private endpoint
- You can create a Cloudwatch Metric, and assocciate a Cloudwatch Alarm then create a Health check that chech the cloudwatch alarm itself.



Ruote 53 active passive failover

- Use an active-passive failover configuration when you want a primary resource or group of resources to be available the majority of the time and you want a secondary resource or group of resources to be on standby in case all the primary resources become unavailable.
- When responding to queries, Route 53 includes only healthy primary resources.
- If all the primary resources are unhealthy, Route 53 begins to include only the healthy secondary resources in response to DNS queries.
- This option does not represent the lowest operational overhead as manual intervention would be required to cause a fail-back to the main website.

- You can use Route 53 to check the health of your resources and only return healthy resources in response to DNS queries. There are three types of DNS failover configurations:

1. Active-passive: Route 53 actively returns a primary resource. In case of failure, Route 53 returns the backup resource. Configured using a failover policy.
2. Active-active: Route 53 actively returns more than one resource. In case of failure, Route 53 fails back to the healthy resource. Configured using any routing policy besides failover.
3. Combination: Multiple routing policies (such as latency-based, weighted, etc.) are combined into a tree to configure more complex DNS failover.

Health check

- For Evaluate Target Health choose Yes for your primary record and choose No for your secondary record.
- For your primary record choose Yes for Associate with Health Check. Then for Health Check to Associate select the health check that you created for your primary resource.