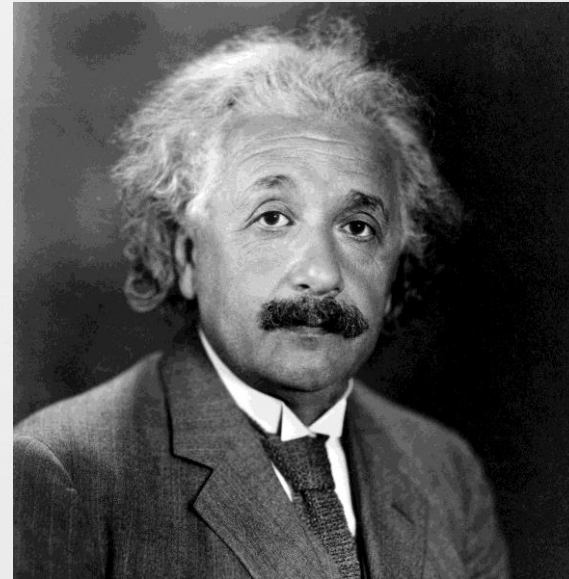




Route 53 & DNS Resolver

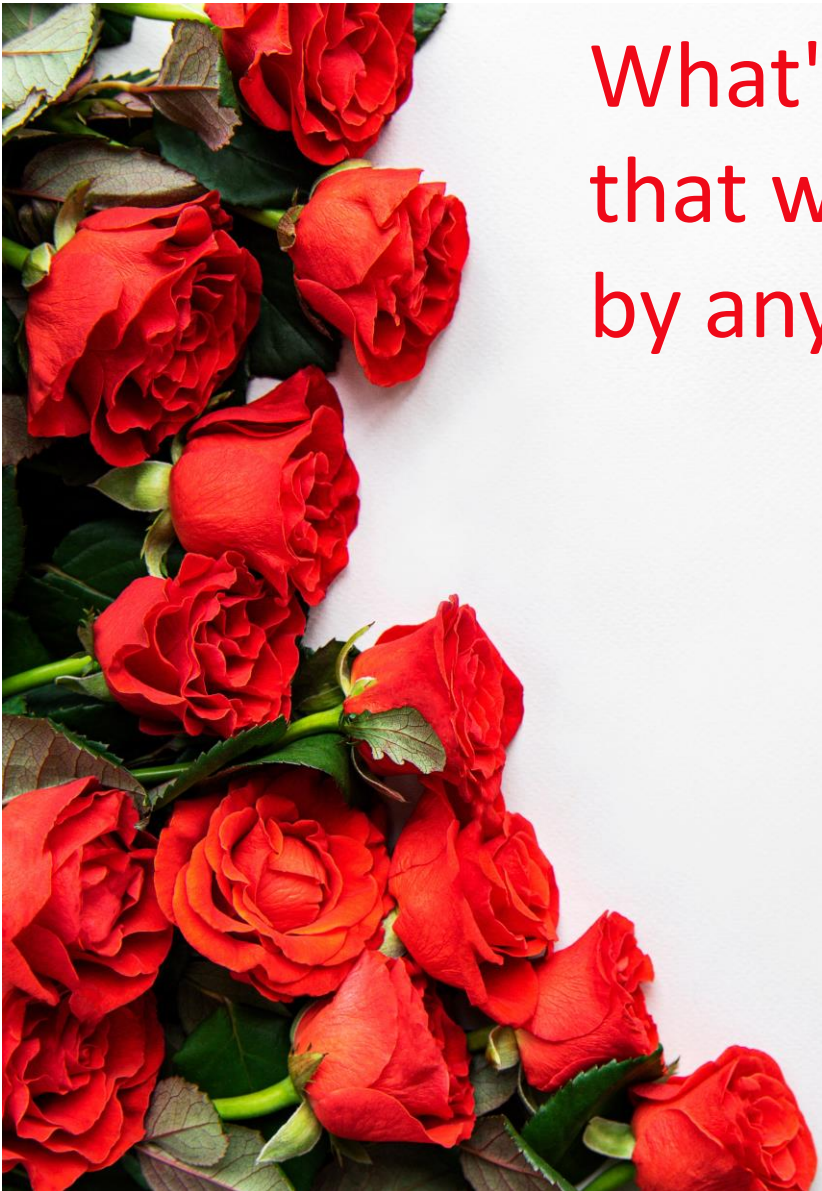
What's in a name?

What's in a name?
that which we call a rose
by any other name would smell as sweet;



~ Albert Einstein

Romeo and Juliet



What's in a name?

What's in a name?
that which we call a rose
by any other name would smell as sweet;

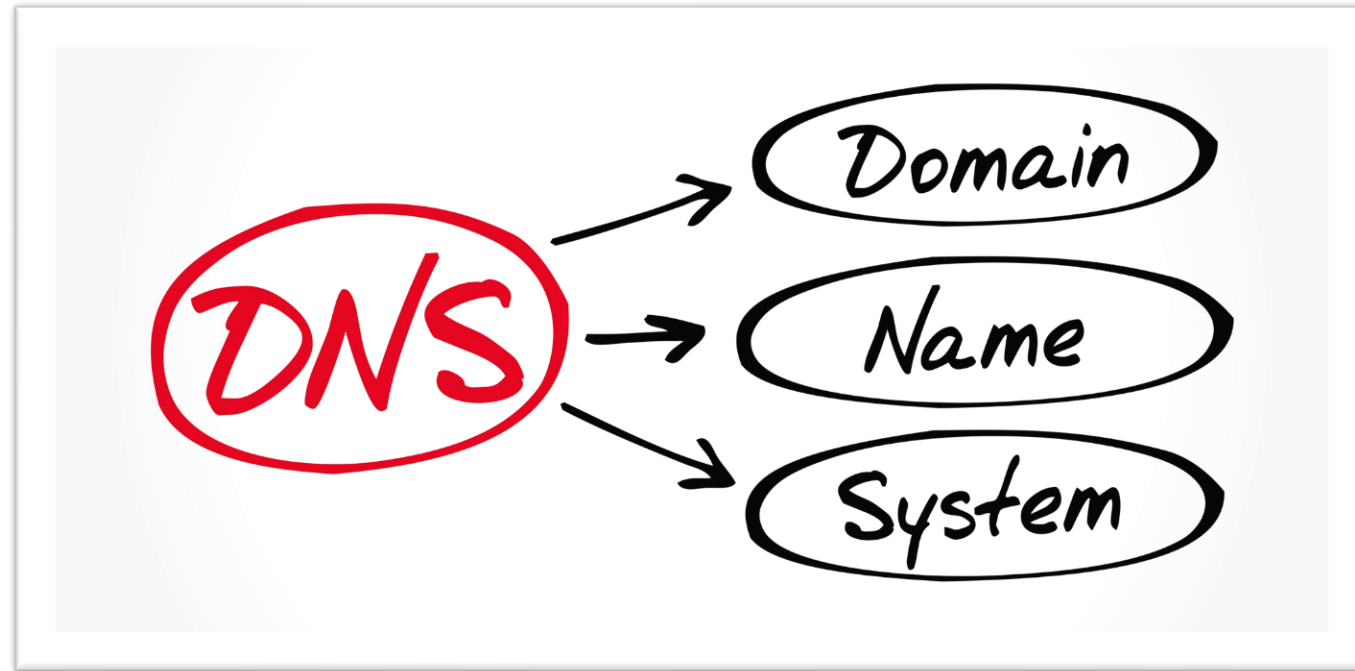


~ William Shakespeare

Romeo and Juliet

What is DNS?

- DNS, or the Domain Name System, translates human readable domain names (for example, `www.amazon.com`) to machine readable IP addresses (for example, `192.0.2.44`).



Phonebook / Telephone directory



A telephone directory, commonly called a telephone book, telephone address book, phonebook, or the white and yellow pages, is a listing of telephone subscribers in a geographical area or subscribers to services provided by the organization that publishes the directory.

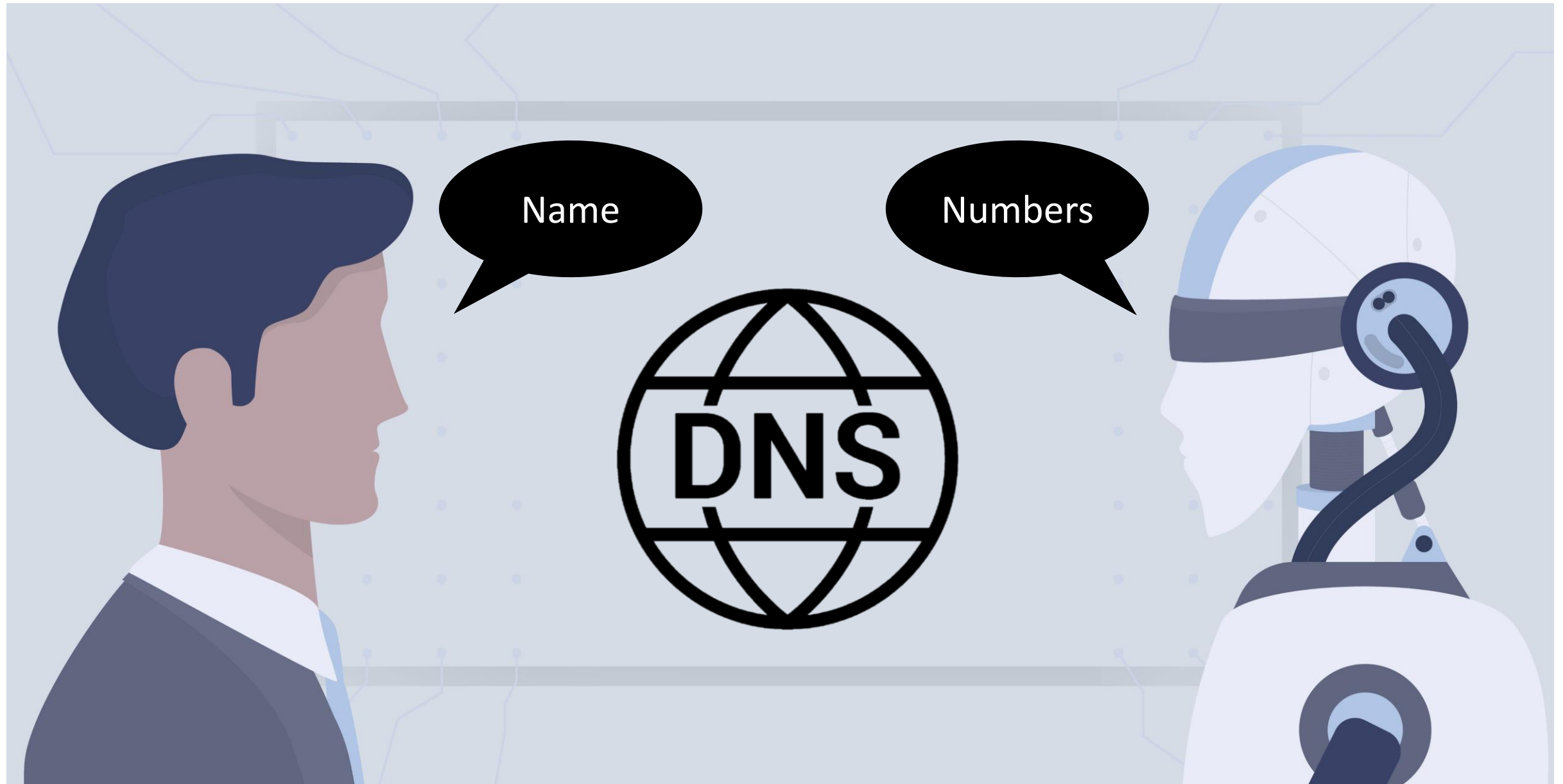
Calling someone by dialing their number



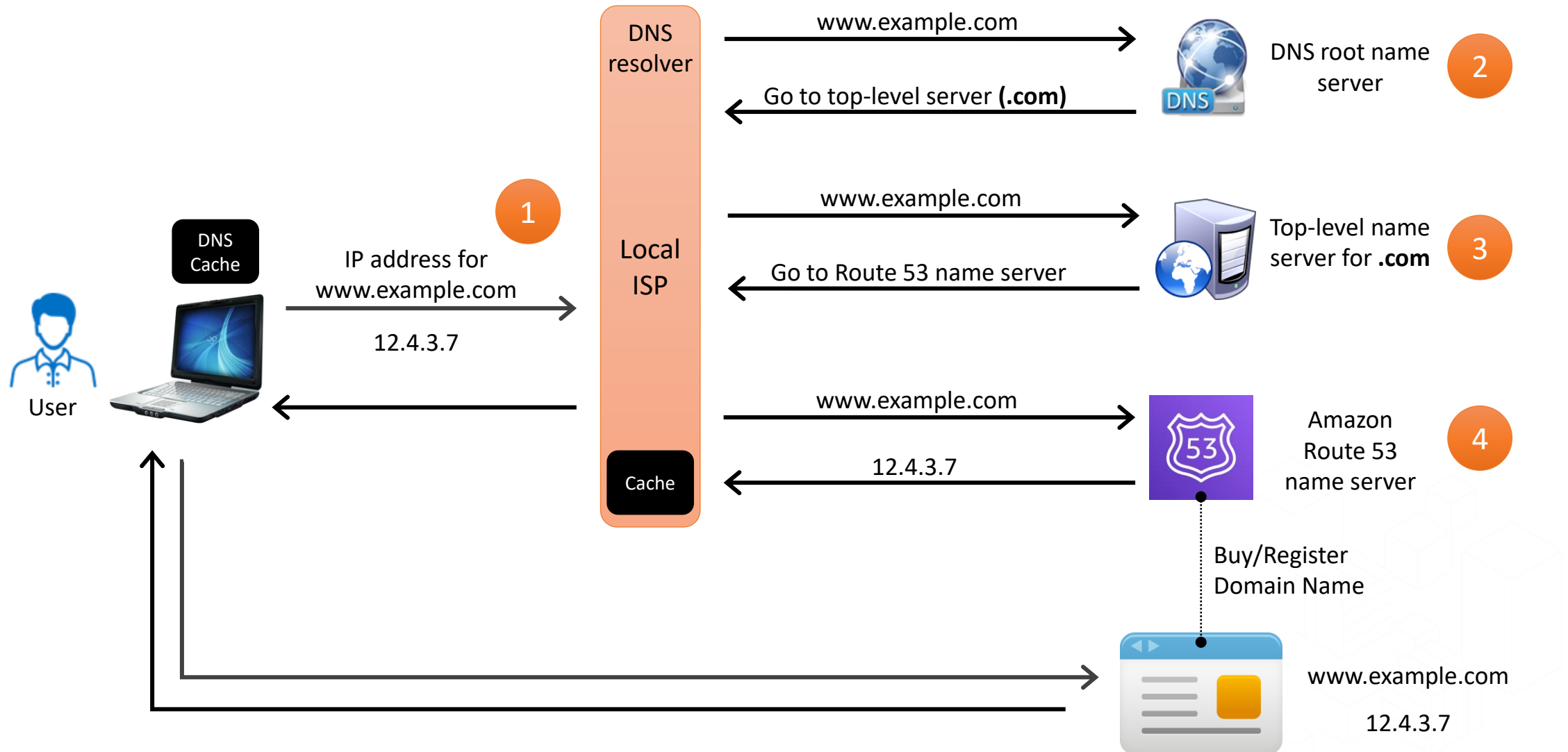
Calling someone by their name – much easier



Human vs. Machine



How DNS Works?



DNS Records

- A Record
 - Points a domain or subdomain to an IP address
 - Amazon.com >> 54.239.28.85
- AAAA Record
 - Point the domain to an Ipv6 address.
 - MyIP.com >> 2a00:23c8:118b:1001:e9ff:4d32:6a62:946c
- CNAME Record
 - Points one domain or subdomain to another domain name
 - www.example.com >> web.example.com
- Alias Record
 - Let you route traffic to selected AWS resources, such as CloudFront distributions, Elastic Load Balancer, Amazon S3 buckets.
 - www.example.com >> elb01-3812349455.eu-west-1.elb.amazonaws.com



Route 53 – Routing Policies

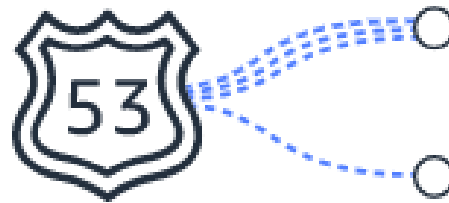
☒ Simple routing

Use if you're routing traffic to just one resource, such as a webserver.



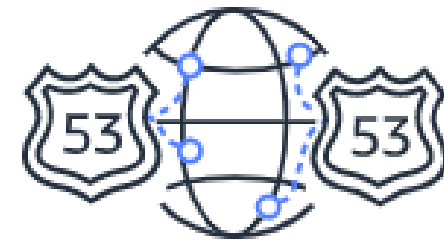
☐ Weighted

Use when you have multiple resources that do the same job, and you want to specify the proportion of traffic that goes to each resource. For example: two or more EC2 instances.



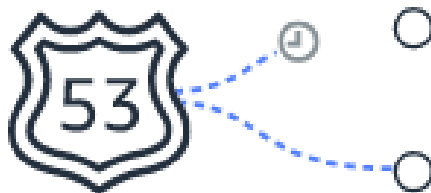
☐ Geolocation

Use when you want to route traffic based on the location of your users.



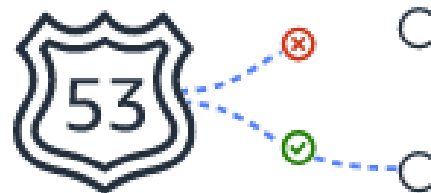
☐ Latency

Use when you have resources in multiple AWS Regions and you want to route traffic to the Region that provides the best latency.



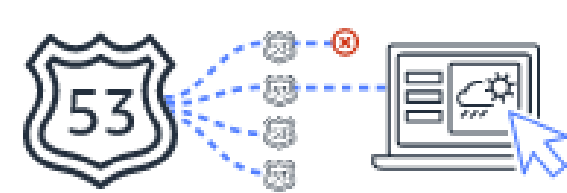
☐ Failover

Use to route traffic to a resource when the resource is healthy, or to a different resource when the first resource is unhealthy.



☐ Multivalue answer

Use when you want Route 53 to respond to DNS queries with up to eight healthy records selected at random.



Route 53 – Routing Policies

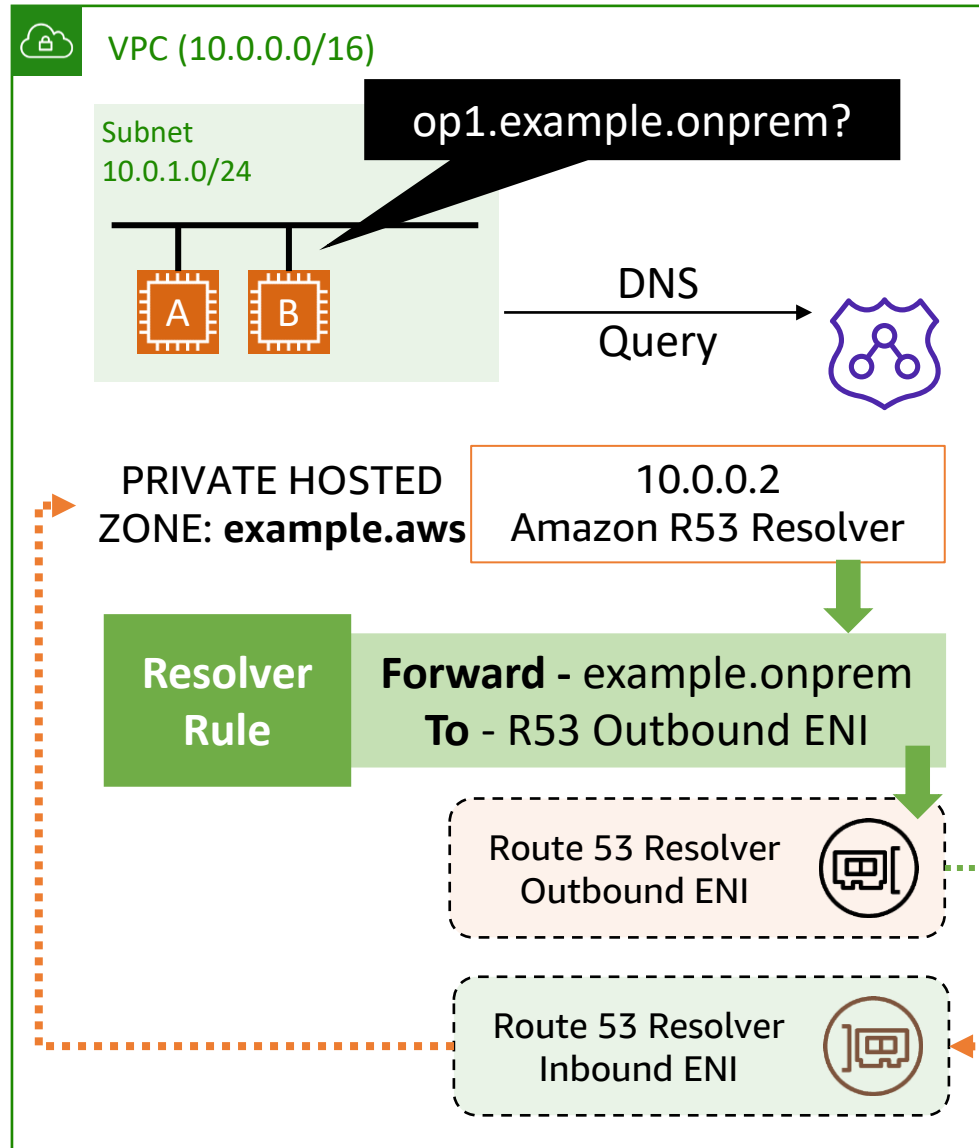
Policy	Decision is..
Simple	Simple. Here's the destination for that name.
Weighted	You can setup multiple resources and I'll route according to the percentage of weight you assign to each resource
Failover	Normally, I'd route you to <Primary>, but it appears down based on my Health Checks so I'll failover to <Backup>.
Geolocation	Looks you are in Europe, so I'm going to route you to a resource closer to you in that region.
Geoproximity	You're closer to the US-EAST-1 region than US-WEST-2 so I'll route you to US-EAST-1
Latency	Let me see which resource has lower latency from you, then I'll direct you that way.
Multi-value Answer	I will return server IP addresses, as a sort of basic local balancer



Route 53 Resolver

Route 53 Resolver – Inbound and Outbound

Within a VPC



On-Prem

