Amazon Web Services

Route 53

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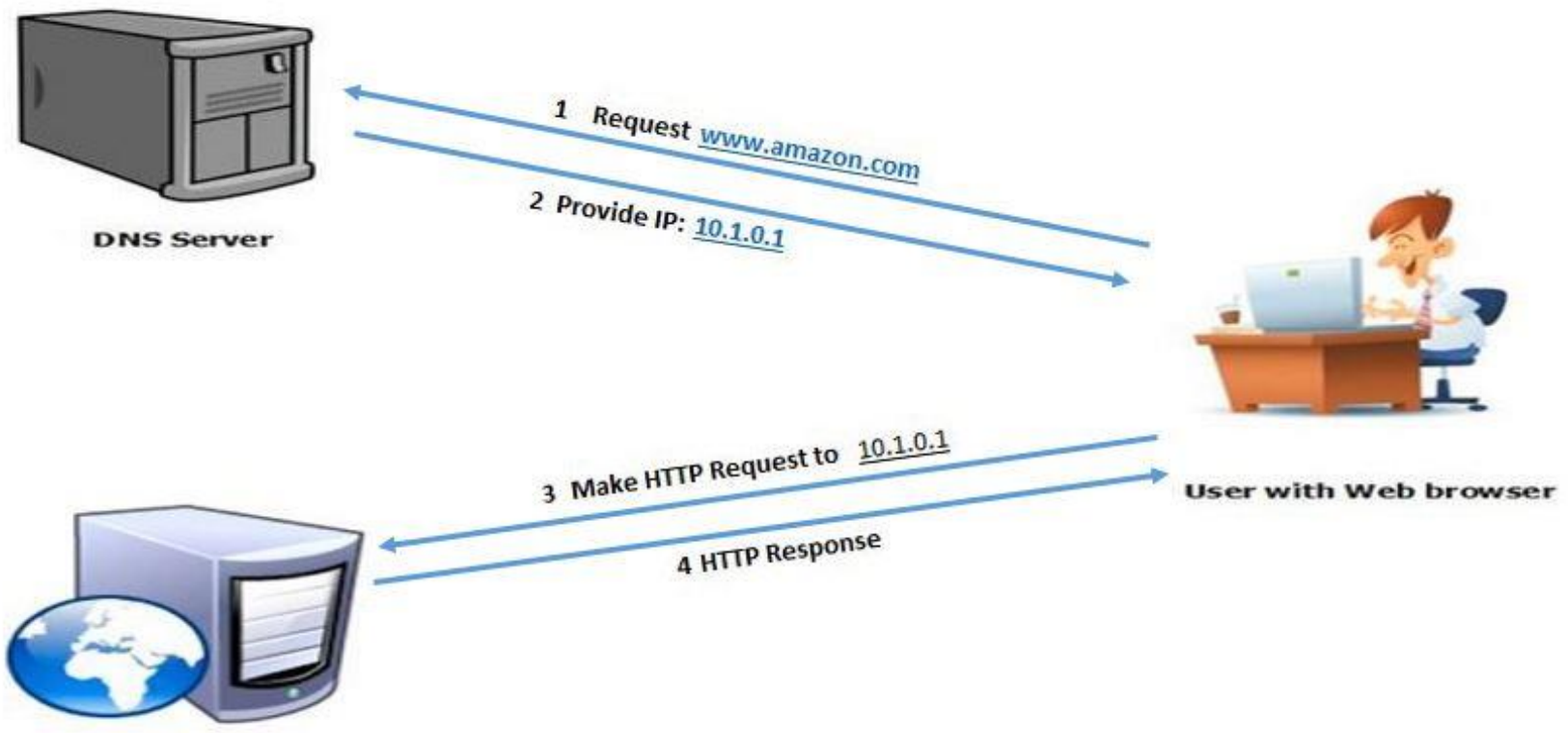
Domain Name System (DNS)

- The Domain Name System (DNS) is the phonebook of the Internet. It is used to convert human friendly domain names into an internet protocol (IP) address and vice versa. DNS is the backbone of the internet.



Route 53

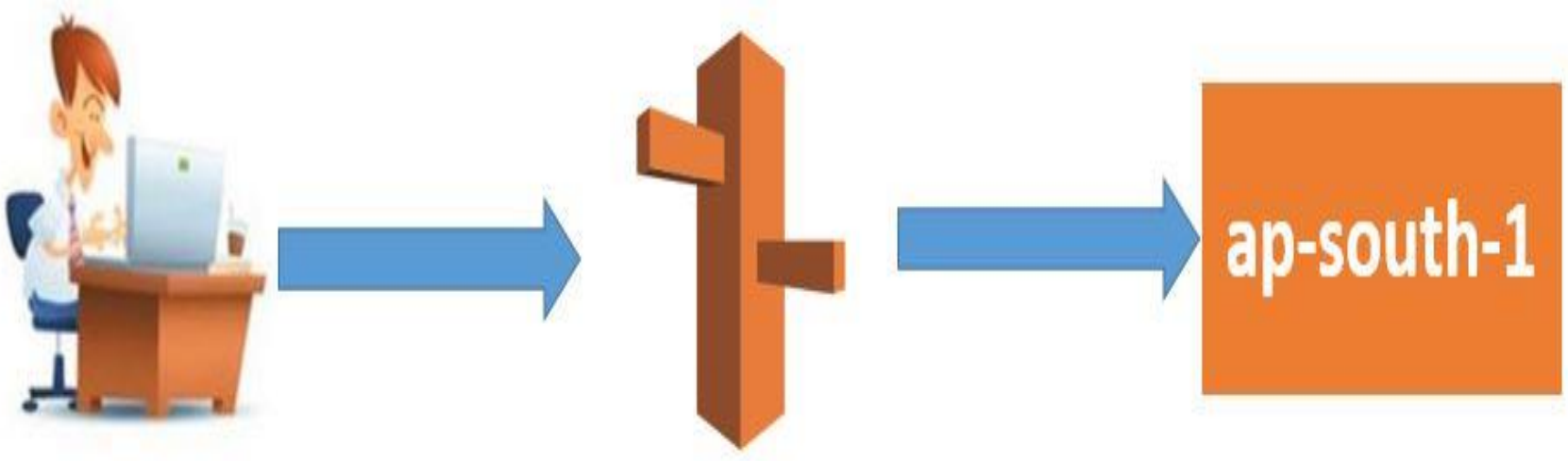
- DNS Service in AWS is called route 53. We can register our domain name in route 53, godaddy, freenon etc.

- In Route 53 we have Six Routing Policies

- Simple Routing Policy
- Latency Routing Policy
- Failover Routing Policy
- Weighted Routing Policy
- Geolocation Routing Policy
- Multivalue Routing Policy

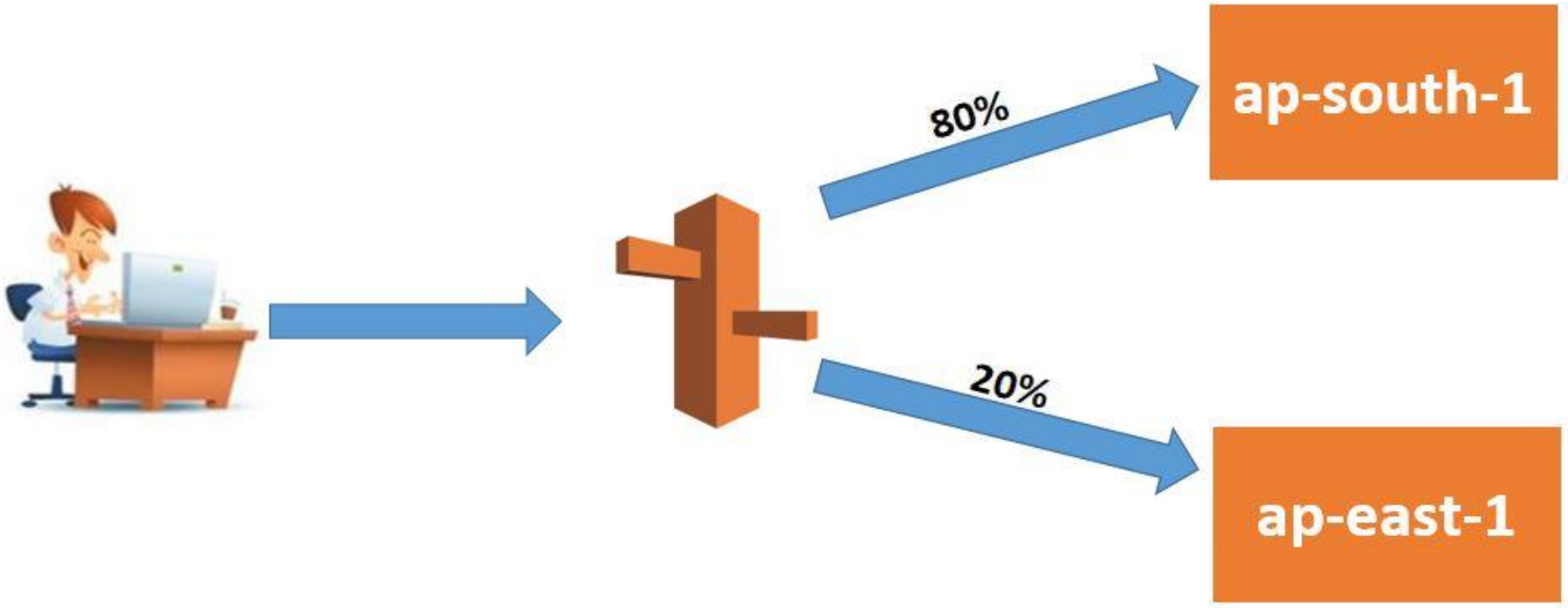
Route 53 - Simple Routing Policy

- This is Default Routing Policy. This is most commonly used when we have a single region that performs a given function for our domain. AWS Route 53 responds to the DNS queries based on the values in the resource record set for e.g. IP address in an A record



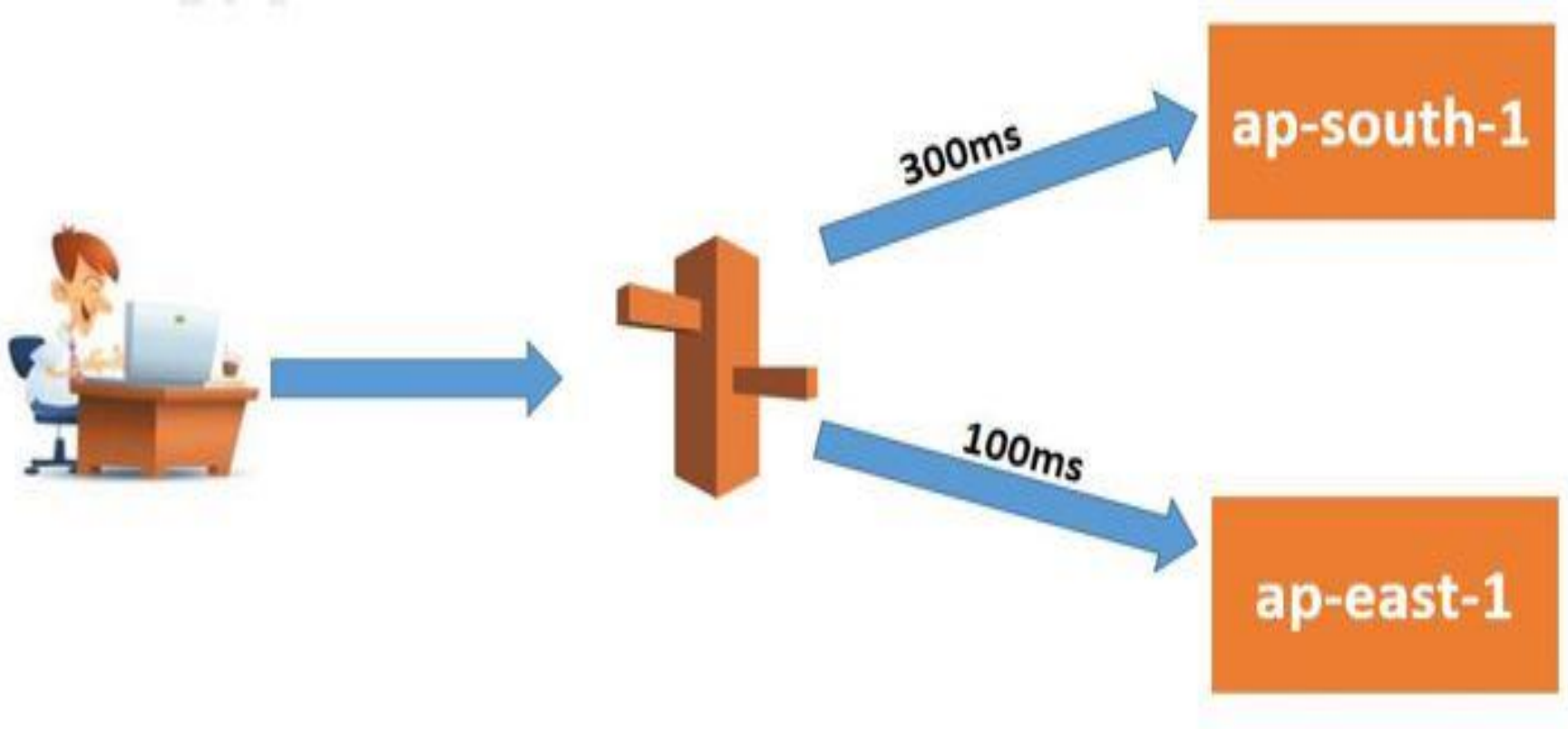
Route 53 - Weighted Routing Policy

- Weighted Routing Policies let us split our traffic based on different weights assigned. For Example: 80% of our traffic to go to ap-south-1 & 20% of our traffic to go to ap-east-1



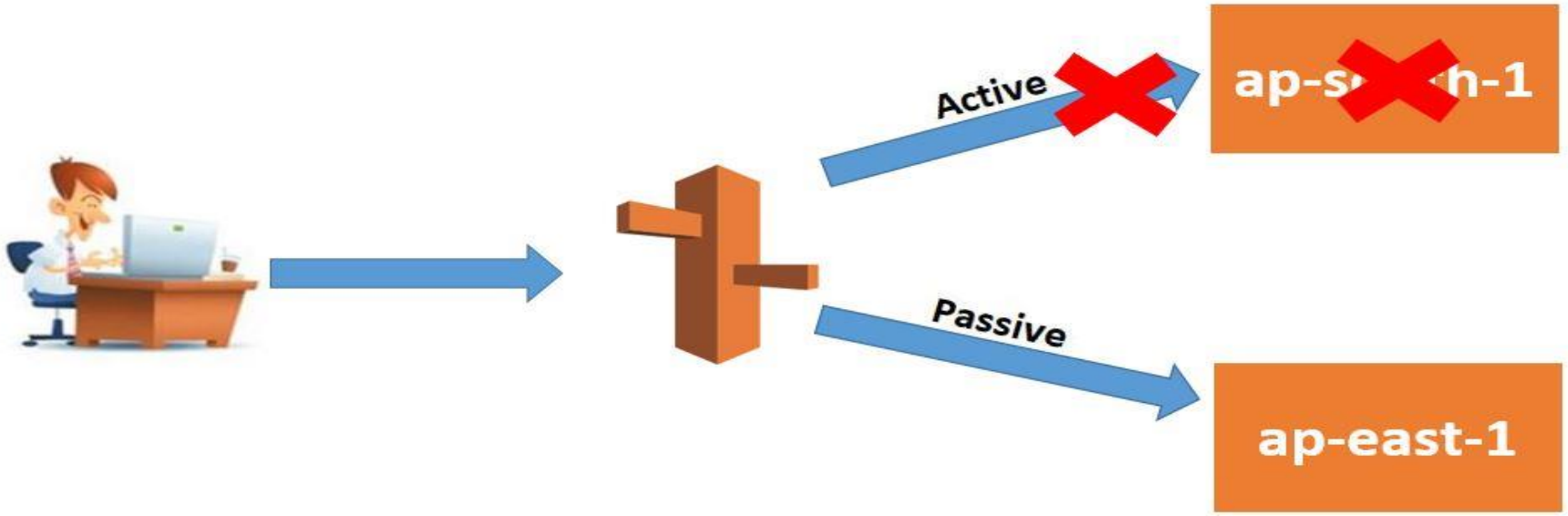
Route 53 - Latency-based Routing Policy

- Latency based routing allow us to route traffic based on the lowest network latency for our end user's (i.e. which region will give them the fastest response time)



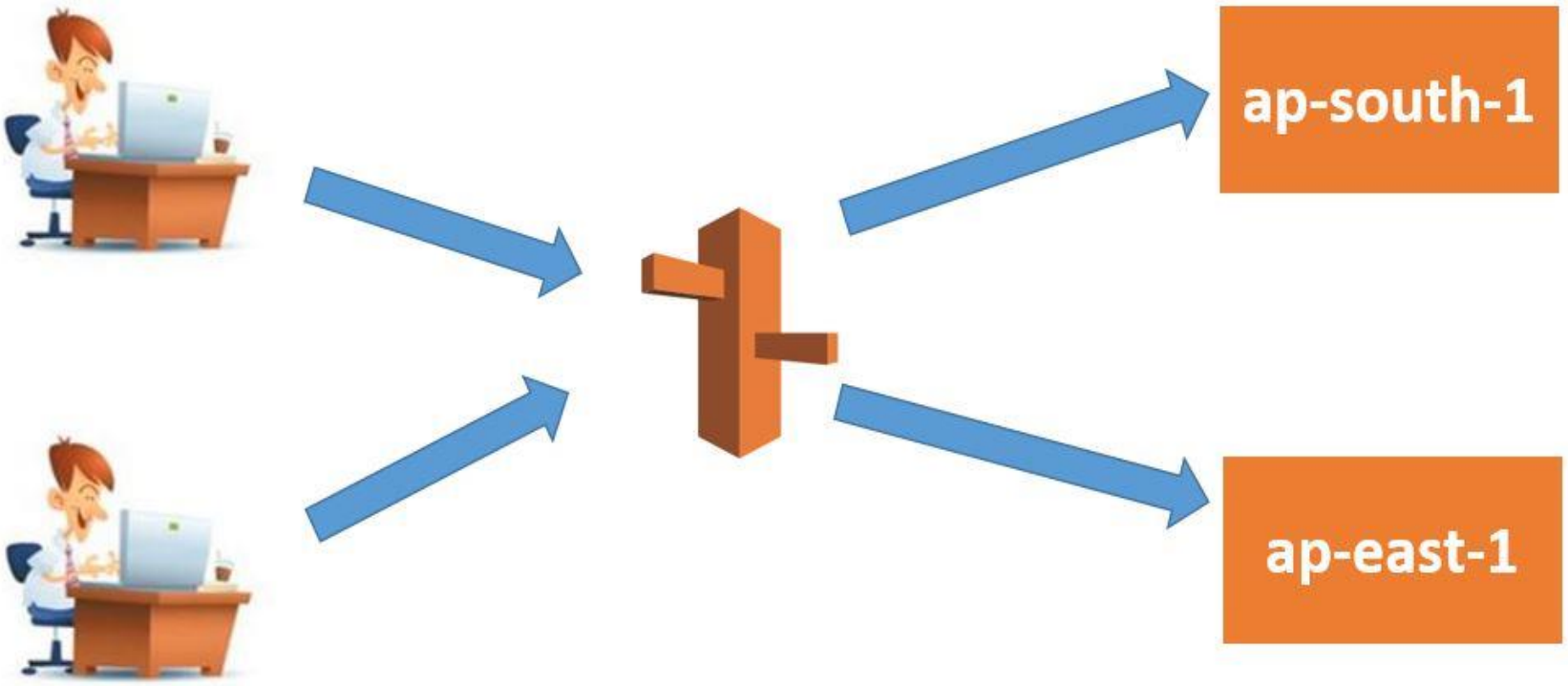
Route 53 - Failover Routing Policy

- Failover routing policy allows active-passive failover configuration, in which one resource takes all traffic when it's available and the other resource takes all traffic when the first resource isn't available. Route 53 health checking agents will monitor each location/endpoint of the application to determine the availability



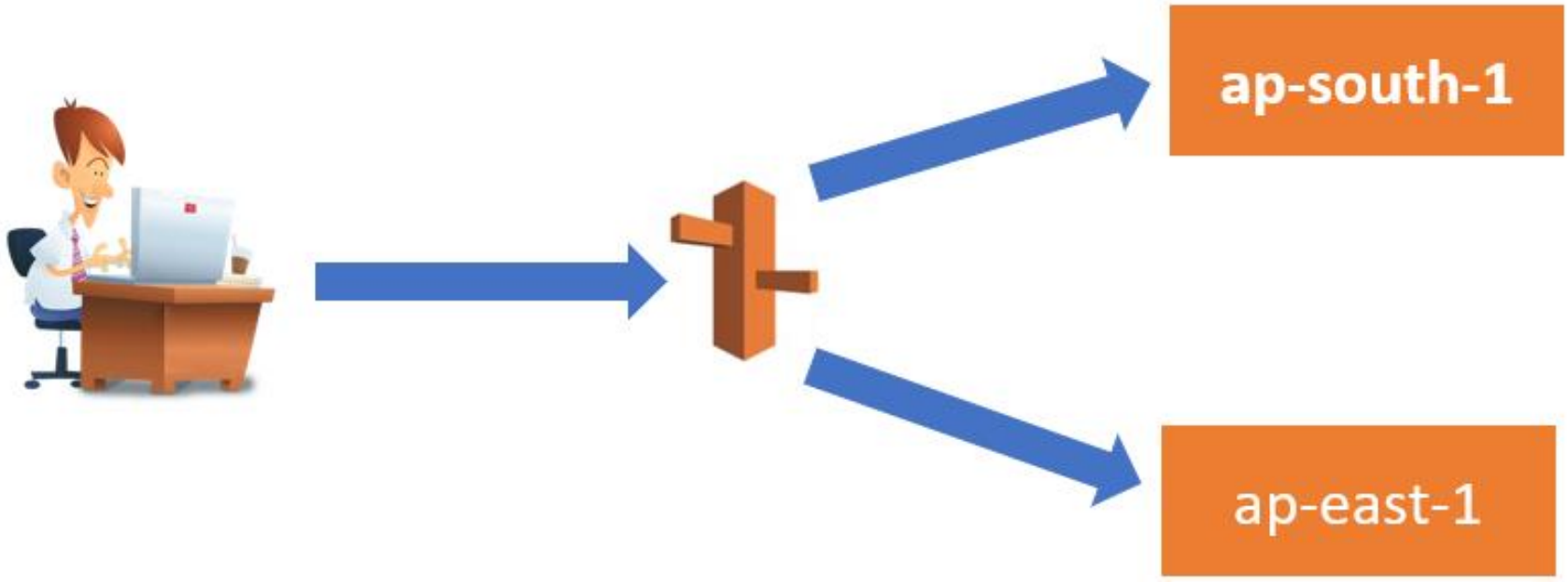
Route 53 - Geolocation Routing Policy

- Geolocation routing lets you choose where your traffic will be send based on the geographic location of your users. Geolocation routing policy allows geographic locations to be specified by continent, country, or by state (only in US)



Route 53 - Multivalue Routing Policy

- Multivalue routing helps return multiple values, e.g. IP addresses for the web servers, in response to DNS queries. Multivalue routing also helps check the health of each resource, so only the values for healthy resources are returned.



Route 53 - Multivalue Routing Policy

- Route 53 responds to DNS queries with up to eight healthy records and gives different answers to different DNS resolvers. It's not a substitute for a load balancer, but the ability to return multiple health-checkable IP addresses is a way to use DNS to improve availability and load balancing.

- If you don't associate a health check with a multivalue answer record, Route 53 always considers the record to be healthy.
- If you have eight or fewer healthy records, Route 53 responds to all DNS queries with all the healthy records.
- When all records are unhealthy, Route 53 responds to DNS queries with up to eight unhealthy records.

Route 53

- Purchase a Domain from in our AWS Account
- Select Mumbai Region
- Create First EC2 Machine
- Add Bootstrap Script: **Click Here**
- Create Security Group & Enable SSH & HTTP Port
- Create Second EC2 Machine
- Add Bootstrap Script: **Click Here**
- Create Security Group & Enable SSH & HTTP Port

Route 53

- Create Target Group
- Select target type as instances
- Select both the machines in the target group
- Click on create target group
- Create Application Load Balancer
- Enter the Name of Load balancer
- Select all subnets
- Select Security group

Route 53

- Select target group
- Click on Create load balancer
- Copy the DNS name & paste in browser
- **Change Region to Sydney**
- Create EC2 Machine
- Add Bootstrap Script: **Click Here**

Route 53

- Create New Security group
- Enable SSH Port & HTTP Port
- Create Target Group
- Select target type as instances
- Select the machine in the target group
- Click on create target group

Route 53

- Create Application Load Balancer
- Enter the Name of Load balancer
- Select all subnets
- Select Security group
- Select target group
- Click on Create load balancer
- Copy the DNS name & paste in browser

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