Route53

First you need to register a domain, this will cost you a 1 time yearly fee. It's best to register a domain you may truly want to use for your business in the future. See a link below . Once you register your domain AWS will create a hosted zone for you and give you 2 name servers.
https://console.aws.amazon.com/route53/home#DomainRegistration

High level Steps

Step 1- Register your domain
Step 2 – Create 2 servers (EC2 Instances) any ami is ok, make sure to add userdata, see sample user data below (see EC2 runbook for how to create instance)
Step 3 – Create a target group (see our ELB run book)
Step 4 – Configure an application load balancer using the target groups (See the ELB runbook)
Step 5 - Request a public certificate in ACM for the cloud front distribution. Use us-east-1 (see steps below)
Step 6 - Create cloudfront distribution for your root domain (see steps below)

Step 7 - Create a route 53 A record for cloud front distribution (see steps below)

Step 8 – Test your website (see steps below)

Step 9 – Routing Policies (see steps below)

Spin up 2 server
Open both port 22 and 80 from anywhere

Pass this user data when spinning up your servers, replacing the region name

Server 1

```
#!/bin/bash
yum update -y
yum install httpd -y
cd /var/www/html
echo "Today, The Awesome JJTech Immersion batch B students are now studying Route53, and  will explore all the routing policies including failover based routing, weighted based routing, latency based routing,  geolocation and simple based routing policies" > index.html
service httpd start
chkconfig httpd on
```

Server 2

```
#!/bin/bash
yum update -y
yum install httpd -y
cd /var/www/html echo "JJ Tech Inc Disaster Recovery strategy include using Route53 Failover Based Routing" > index.html
service httpd start
chkconfig httpd on
```

Step 5 - Request a public certificate in ACM for the cloud front distribution. Use us-east-1

a) Go to the AWS Certificate Manager Console (AWS) in us-east-1
b) Choose **Request a public certificate** and then **Request a certificate**.
c) Under **Domain name**, enter your domain, such as **jjtech.com**.

a. Under **Add another name to this certificate**, enter an asterisk in front of the domain name to request a wildcard certificate for all subdomains, such as ***.jjtech.com**. And choose Next

d) On the **Select validation method page**, choose **DNS validation** and then **Next**.
e) **Confirm and request**.
f) On the **Validation** page, expand both domains and choose **Create record in Route 53** to automatically add the CNAME records for your domains, and then choose **Create**.

Step 6 - Create CloudFront distribution for your root domain

Create a CloudFront distribution for your domain so it can use HTTPS when traffic.

1. Go to Cloud front and Choose **Create Distribution**.
2. Under **Origin Settings**, for **Origin Domain Name**, select the DNS of the load balancer you created
3. Under **Default Cache Behavior Settings**, do the following:
    - Under **Viewer**, set **Viewer protocol policy** to **Redirect HTTP to HTTPS**.
    - Set **Cache settings** to **CachingDisabled**.
4. For the fields under **Settings**, do the following:
    - Choose **Add item** for **Alternate domain name (CNAME) - optional**, and enter your root domain, such as **jjtech.com**.
    - For **Custom SSL Certificate**, choose the certificate you created.
    - Leave everything else as default.
5. At the bottom of the page, choose **Create Distribution**. This takes a few minutes. Wait for your distribution to be deployed before proceeding to the next step.

Step 7 - Create a route 53 A record for cloud front distribution

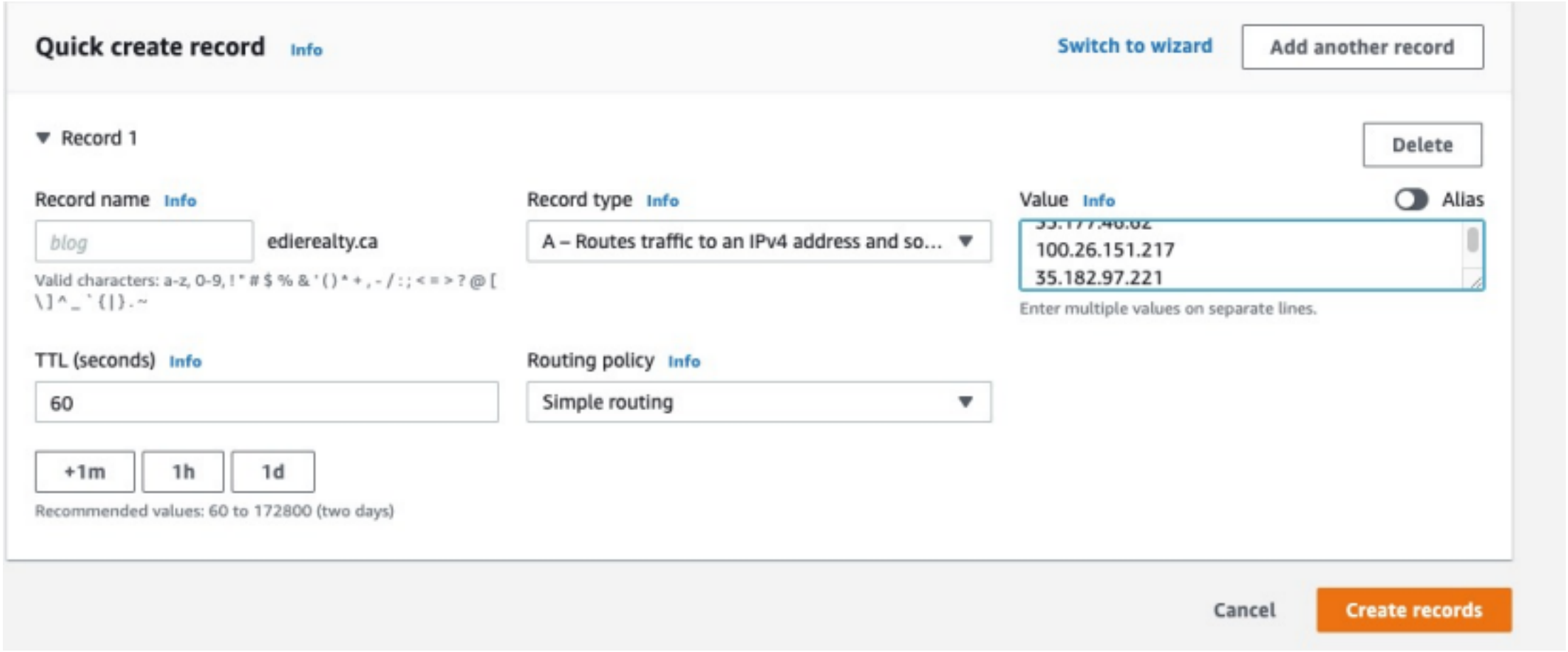
1. Go to your Route 53 hosted zone and

2. Choose **Create record** and switch to wizard
3. Choose **Simple routing** and choose **Next**.
4. Choose **Define simple record**.
5. In **Record type**, choose **A – Routes traffic to an IPv4 address and some AWS resources**.
6. In **Value/Route traffic to**, choose **Alias to CloudFront distribution** and choose the distribution.
7. For **Evaluate target health**, choose **No**.
8. Choose **Define simple record** and create .

Step 8 – Test your website

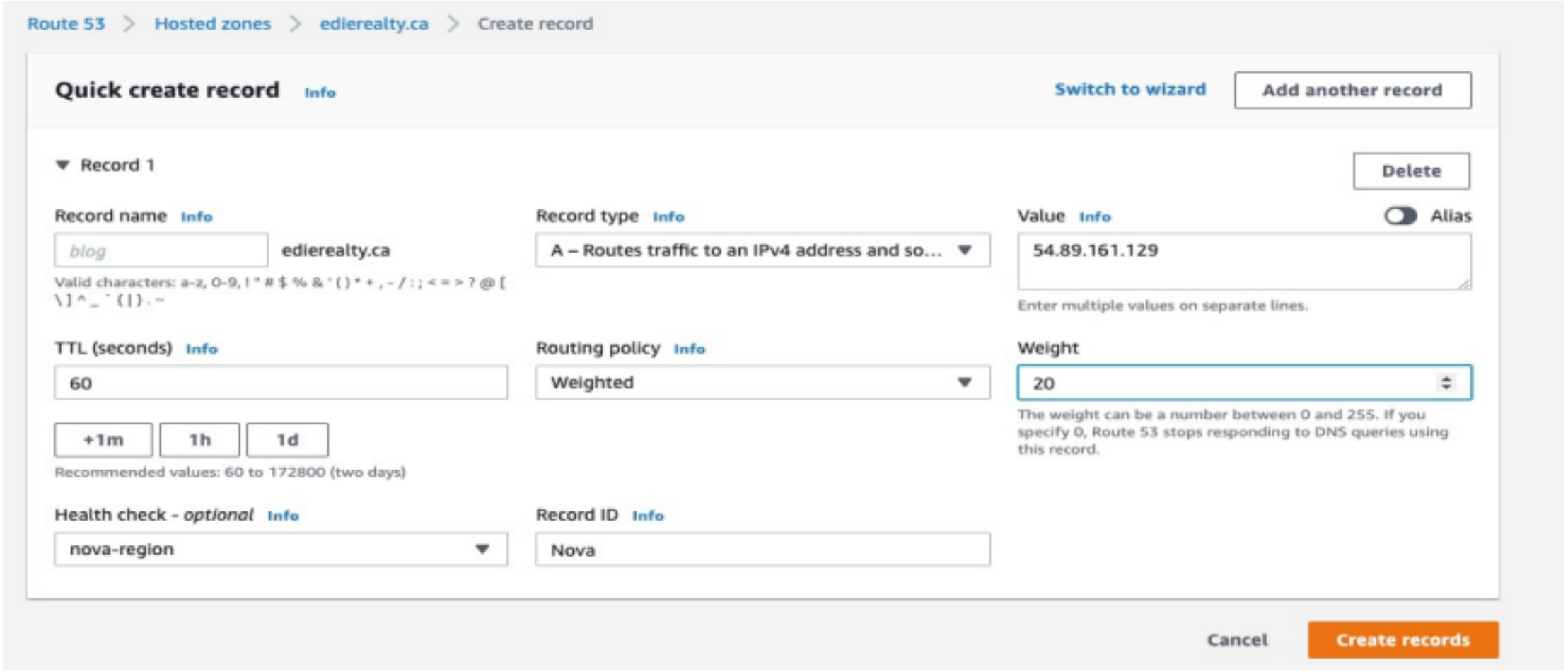
1. To verify that the website is working correctly, open a web browser and browse to the following URLs: https://*your-domain-name* for example, example.com

Step 9 – Routing Policies

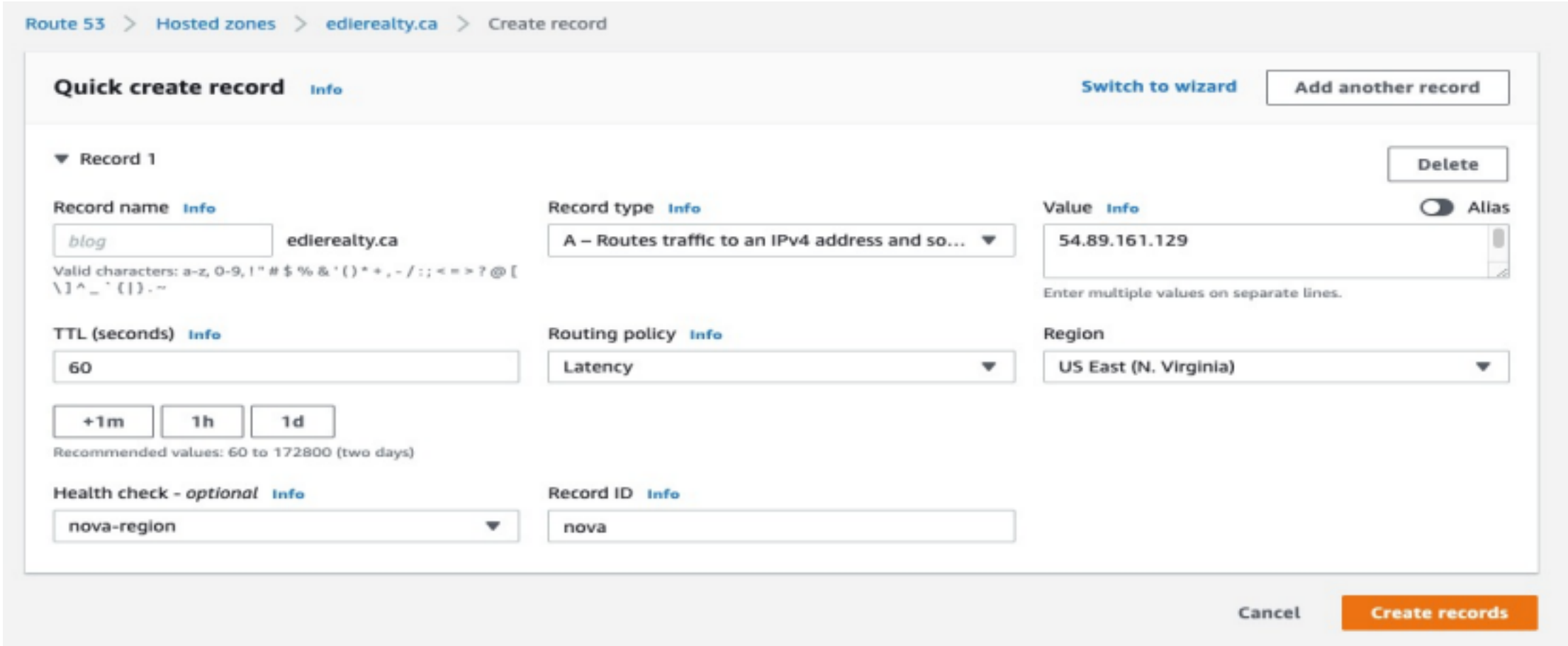


Weighted Routing

- Create individual records for each server



Latency Routing


Route 53 > Hosted zones > ediierealty.ca > Create record
Quick create record Info
Switch to wizard
Add another record
Record 1
Delete
Record name Info
blog
ediierealty.ca
Valid characters: a-z, 0-9, ! " # $ % & ' ( ) * + , - / : ; < = > ? @ [\ ] ^ _ ` { | } . ~
Record type Info
A – Routes traffic to an IPv4 address and so...
Value Info
Alias
54.89.161.129
Enter multiple values on separate lines.
TTL (seconds) Info
60
+1m
1h
1d
Recommended values: 60 to 172800 (two days)
Routing policy Info
Latency
Region
US East (N. Virginia)
Health check - optional Info
nova-region
Record ID Info
nova
Cancel
Create records