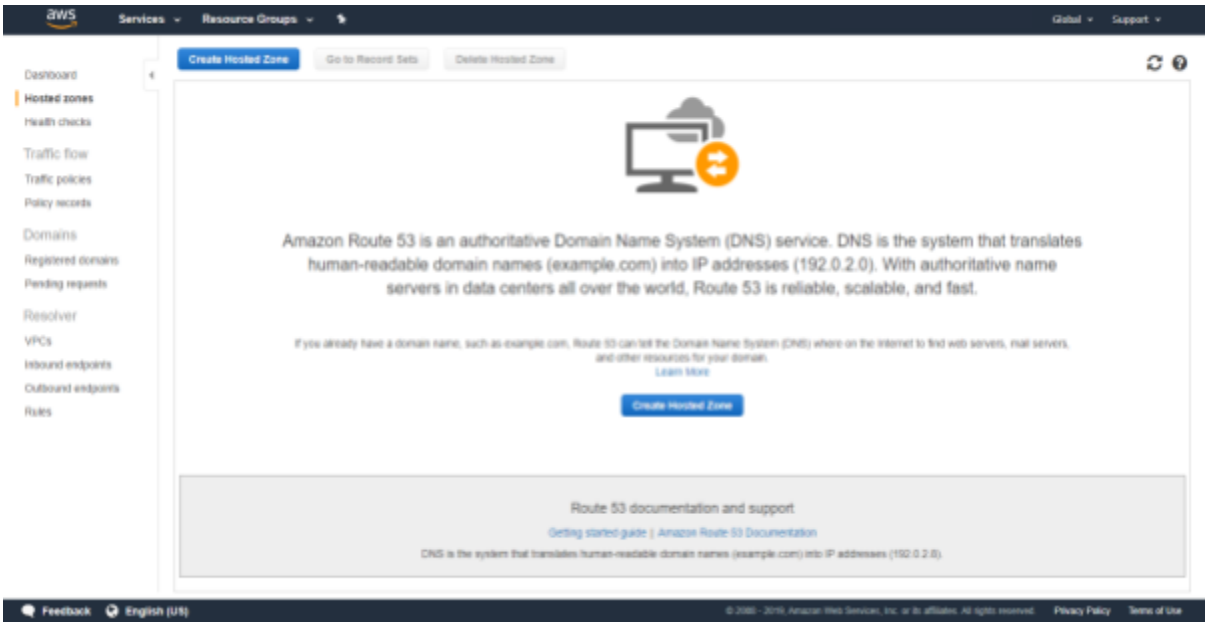
Aula 3 - Lab Route 53 Routing Policy

Para este Lab, será necessário criar préviamente os seguintes recursos:

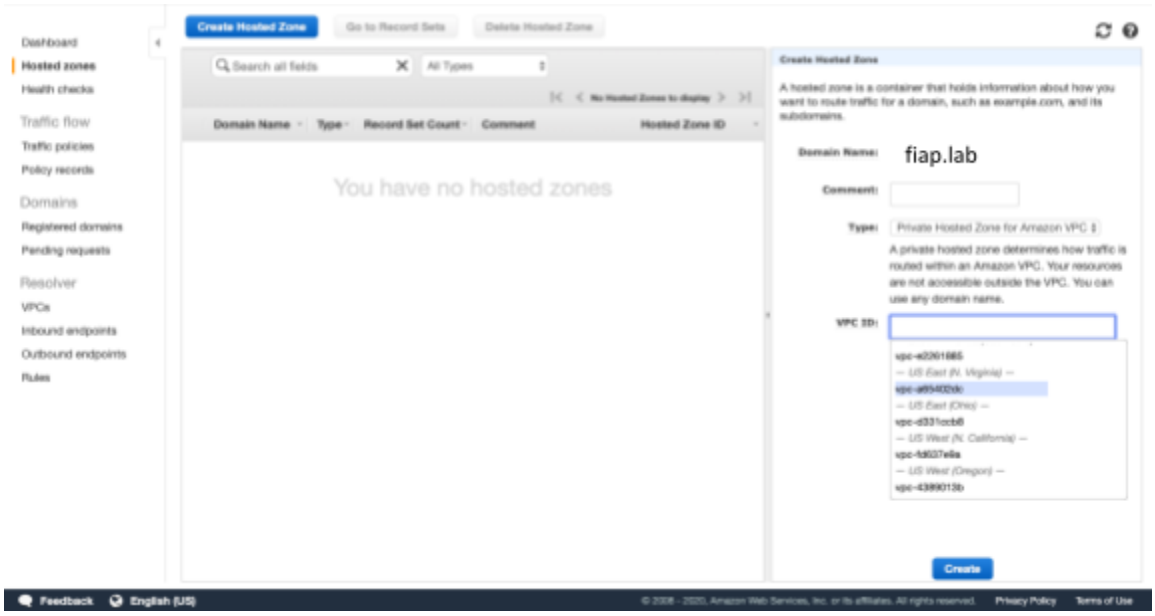
- 1 VPC em N. Virginia (us-east-1) com DNS ativado (CIDR: 10.0.0.0/16).
- 1 Subnet com o mesmo CIDR da VPC criada em Virginia.
- 1 VPC em Frankfurt (eu-central-1) com DNS ativado (CIDR: 172.31.0.0/16).
- 1 Subnet com o mesmo CIDR da VPC criada em Frankfurt.
- 1 VPC-Peering entre a vpc criada em Virginia e a criada em Frankfurt.
- Rota para ambas VPCs pelo peering criado.
- 2 EC2, cada uma em uma região.
- Security Groups das EC2 com inbound ICMP para 0.0.0.0/0
- 1 Health-Check simples apontando para https://fiap.com.br:443 retornando status Healthy

1. Criar Hosted Zone Privada



1. Acesse o painel de Hosted Zones no Route 53: https://console.aws.amazon.com/route53/home?region=us-east-1#hosted-zones:
2. Para criar uma private hosted zone, clique em **Create Hosted Zone**.

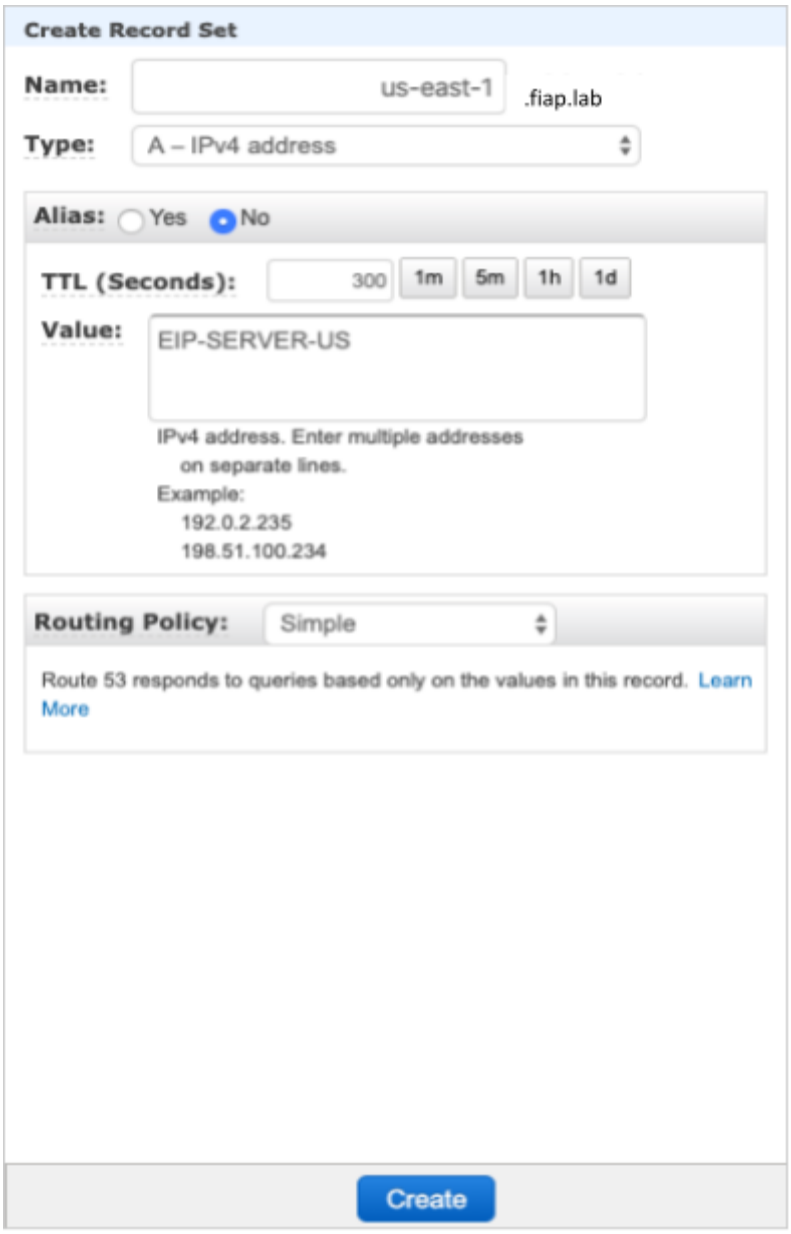
3. Em seguida, preencha os campos abaixo:
    - Domain: **fiap.lab**
    - Comment: **DEIXE EM BRANCO**
    - Type: **Private Hosted Zone for Amazon VPC**
    - VPC ID: **ESCOLHA O ID DA VPC DE US EAST (N. VIRGINIA)**
4. Clique em **Create**



5. Após criar, clique em **Back to Hosted Zone**
6. Selecione a hosted zone **fiap.lab**, clicando no marcador circular ao lado do nome.
7. No menu do lado direito, clique novamente no campo **VPC ID** e adicione a VPC criada em Frankfurt.
8. Clique em **Associate New VPC**

2. Criar Hosted Zone Privada

1. Entre na hosted zone **fiap.lab** e clique em Create Record Set e preencha os campos conforme figura abaixo, adicionando no campo Value o IP da EC2 de Virginia. Mantenha a opção Routing Policy como **Simple** e clique em **Create**.



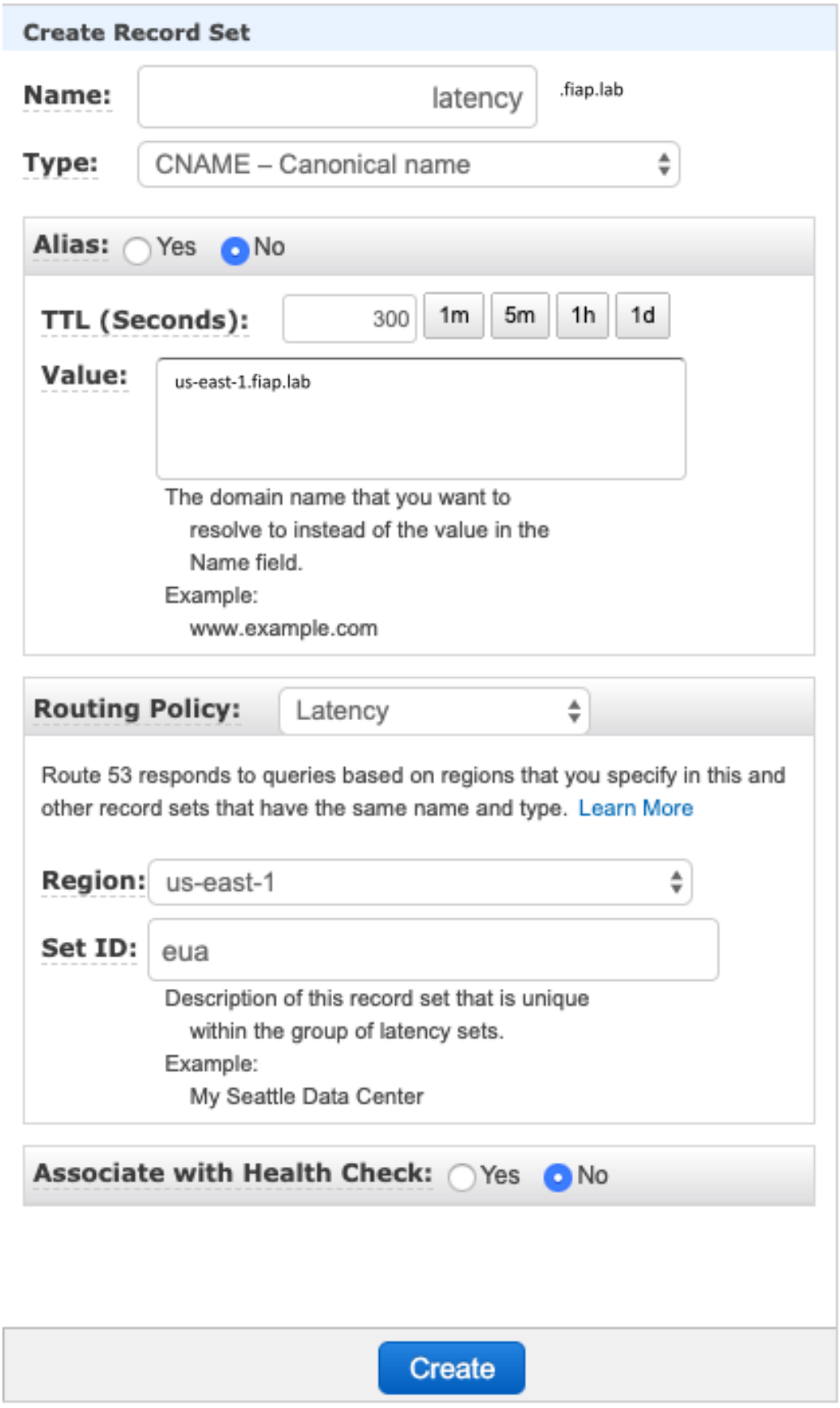
2. Repita o processo anterior, desta vez alterando os valores referentes a região de Frankfurt, conforme figura abaixo.

3. Acesse a EC2 da virginia, via ssh, e verifique o retorno do comando: nslookup us-east-1.fiap.lab
4. Acesse a EC2 de frankfurt, via ssh, e verifique o retorno do comando: nslookup eu-central-1.fiap.lab

3. Latency Routing Policy

1. Entre na hosted zone fiap.lab e clique em Create Record Set e preencha os campos abaixo:
    - Name: **latency**

- Type: **CNAME**
- Value: **us-east-1.fiap.lab**
- Routing Policy: **Latency**
- Region: **us-east-1**
- Set ID: **eua**
- Associate with Health Check: **No**

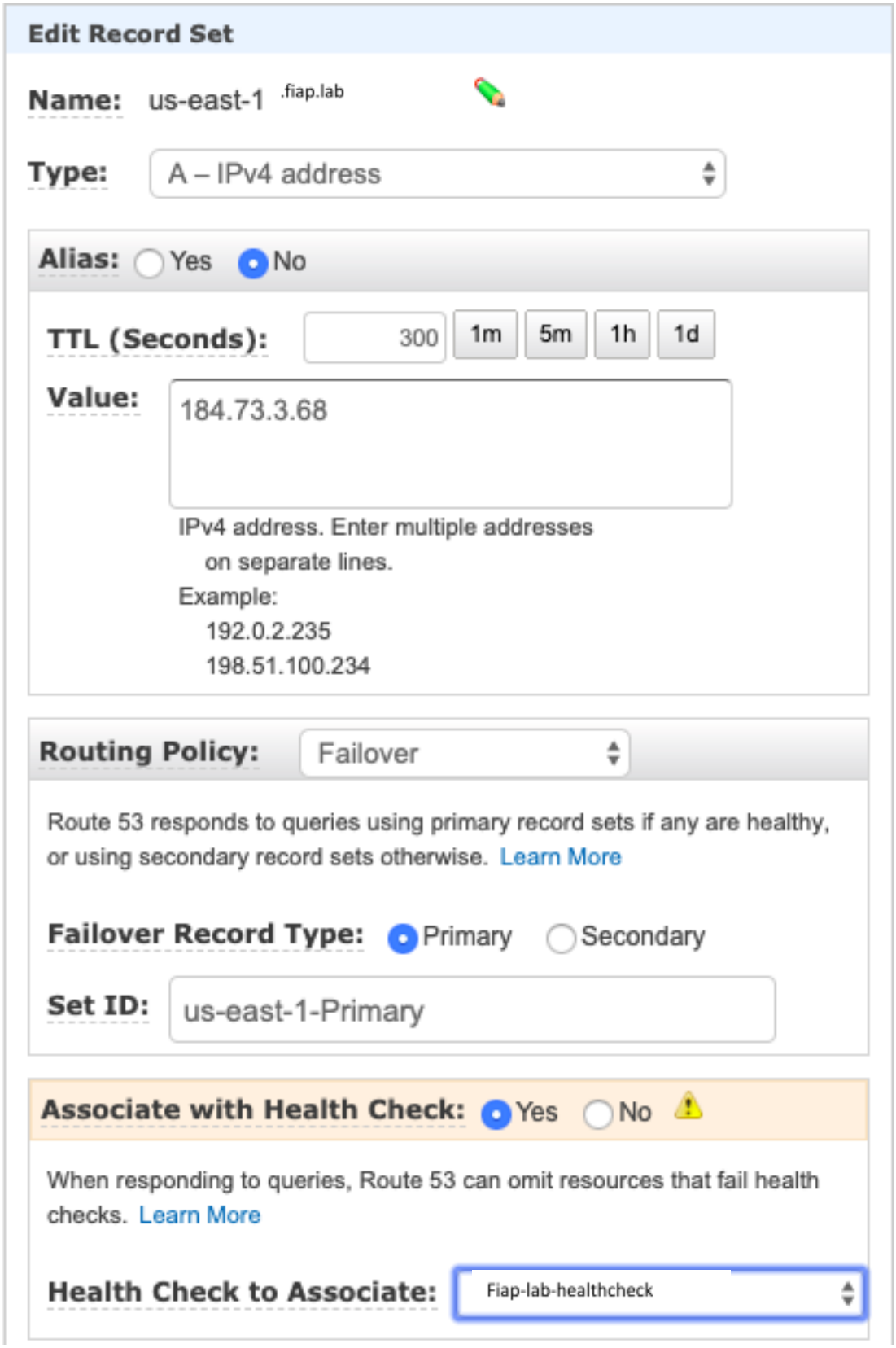

Create Record Set
Name:
latency
.fiap.lab
Type:
CNAME – Canonical name
Alias:
Yes
No
TTL (Seconds):
300
1m
5m
1h
1d
Value:
us-east-1.fiap.lab
The domain name that you want to resolve to instead of the value in the Name field.
Example:
www.example.com
Routing Policy:
Latency
Route 53 responds to queries based on regions that you specify in this and other record sets that have the same name and type. Learn More
Region:
us-east-1
Set ID:
eua
Description of this record set that is unique within the group of latency sets.
Example:
My Seattle Data Center
Associate with Health Check:
Yes
No
Create

2. Repita o processo anterior, alterando os valores:
    - Value: **eu-central-1.fiap.lab**
    - Region: **eu-central-1**
    - Set ID: **europa**

3. Acesse a EC2 virginia, via ssh, e verifique o retorno do comando: nslookup geo.fiap.lab
4. Acesse a EC2 frankfurt, via ssh, e verifique o retorno do comando: nslookup geo.fiap.lab

4. Failover Routing Policy

1. Entre na Hosted Zone **fiap.lab** e edit o record set **us-east-1.fiap.lab**
2. Altere as opções:
    - Routing Policy: **Failover**
    - Failover Record Type: **Primary**
    - Set ID: **us-east-1-primary**
    - Associate with Health Check: **Yes**
    - Selecione o health-check criado anteriormente.


Edit Record Set
Name: us-east-1 .fiap.lab
Type: A – IPv4 address
Alias: Yes No
TTL (Seconds): 300 1m 5m 1h 1d
Value: 184.73.3.68
IPv4 address. Enter multiple addresses on separate lines.
Example:
192.0.2.235
198.51.100.234
Routing Policy: Failover
Route 53 responds to queries using primary record sets if any are healthy, or using secondary record sets otherwise. Learn More
Failover Record Type: Primary Secondary
Set ID: us-east-1-Primary
Associate with Health Check: Yes No
When responding to queries, Route 53 can omit resources that fail health checks. Learn More
Health Check to Associate: Fiap-lab-healthcheck

3. Repita o processo anterior, editando o record set **eu-central-1.fiap.lab** Altere as opções:
    - Name: **us-east-1**
    - Routing Policy: **Failover**
    - Failover Record Type: **Secondary**
    - Set ID: **us-east-1-secondary**
    - Associate with Health Check: **No**

Edit Record Set

Name: us-east-1 .fiap.lab

Type: A – IPv4 address

Alias: Yes No

TTL (Seconds): 300 1m 5m 1h 1d

Value: 54.161.56.78

IPv4 address. Enter multiple addresses on separate lines.

Example:

192.0.2.235

198.51.100.234

Routing Policy: Failover

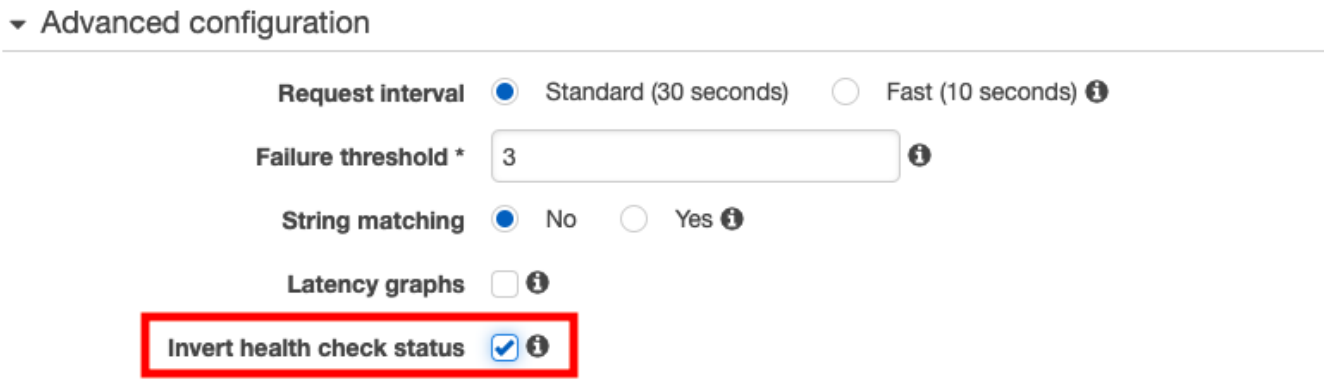
Route 53 responds to queries using primary record sets if any are healthy, or using secondary record sets otherwise. Learn More

Failover Record Type: Primary Secondary

Set ID: us-east-1-Secondary

Associate with Health Check: Yes No

4. Acesse a EC2 virginia, via ssh, e verifique o retorno do comando: nslookup us-east-1.fiap.lab. Deverá retornar o IP do Server1-us
5. Vamos simular uma falha no health-check, forçando ele a ficar unhealthy, selecionando a opção **Invert health check status** no **Advanced Configuration**



6. Acesse a EC2 virginia, via ssh, e verifique o retorno do comando: nslookup us-east-1.fiap.lab. Deverá retornar o IP do Server1-eu