ICT & Infra S3 S/NO week 12: AWS Route53(1)

Class: I3-CB01

Student numbers: 4642295, 4216709, 4961854

Student names: Ryan Smith, Edris Rahimi, Heiko Morales

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Introduction

S/NO: Following these exercises you will learn how to:

- setup the initial lab configuration for AWS Route53 exercises

- create public hosted zone and simple records

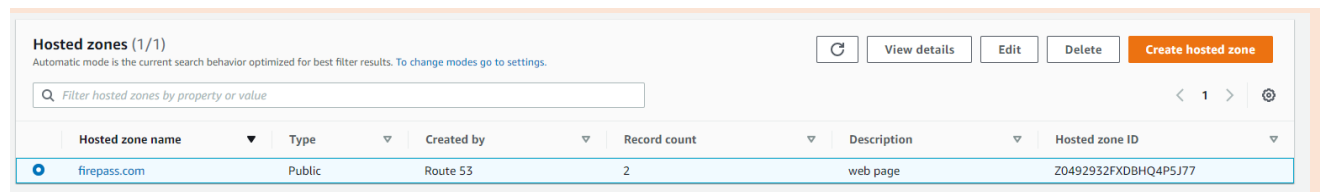- configure heath check and failover records.

How to deliver your assignments?

Fill in this document with required information. Answer questions and upload the document to Canvas at most one week after the assignment is given.

Assignment 1: Create initial AWS Route53 setup.

- Fellow the demo from the lecture. Create necessary entities / configurations in AWS with provided Powershell scripts. We will need this setup for the following weeks Route53 setups.
- Use "SNO_week11_scripts.zip" scripts

Provide screenshots and descriptions of the steps above

Assignment 2 (Optional): Create initial AWS Route53 setup with Ansible/Terraform

- Create the demo components in Terraform/CloudFormation environment. You are going to automate Route53 components orchestration.

Provide screenshots and descriptions of the steps above

Assignment 3: Create AWS Route53 public hosted zone, transfer existing / register new domain to/in AWS.

- Fellow the demo from the lecture. Create necessary entities / configurations in AWS with provided Powershell scripts.
- Use "SNO_week12_scripts.zip" scripts

Provide screenshots and descriptions of the steps above

First, we choose in the free domain and take it.

Add contact details

and it is created

Public **firepass2.com** Info

[Delete zone] [Test record] [Configure query logging]

▶ **Hosted zone details**

[Edit hosted zone]

Records (2) | DNSSEC signing | Hosted zone tags (0)

Records (2) Info
Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

[↻] [Delete record] [Import zone file] [**Create record**]

[Q Filter records by property or value] | Type ▼ | Routing policy ▼ | Alias ▼ | < 1 > ⚙

☐	Record name ▽	Type ▽	Routing policy ▽	Differentiator ▽	Value/Route traffic to ▽
☐	firepass2.com	NS	Simple	-	ns-487.awsdns-60.com. ns-732.awsdns-27.net. ns-1188.awsdns-20.org. ns-1854.awsdns-39.co.uk.
☐	firepass2.com	SOA	Simple	-	ns-487.awsdns-60.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400

Assignment 4: Create AWS Route53 chain of failover records

Implement the chain of failover records demonstrated in the class.

Demonstrate the working scenario, diverting traffic to the last instance in the chain.

Think about where this scenario can be applied in your case-study project. Provide a diagram if possible.

Provide screenshots and descriptions of the steps above

For failover, go to the health checks section.

Welcome to Route 53 health checks

Route 53 health checks monitor the health and performance of your application's servers, or endpoints, from a network of health checkers in locations around the world. You can specify either a domain name or an IP address and a port to create HTTP, HTTPS, and TCP health checks that check the health of the endpoint. To get started, click **Create health check**.

[Create health check]

Health check concepts

Availability and performance monitoring

You can use Route 53 health checks for monitoring and alerts. Each health check provides CloudWatch metrics that you can view and set alarms on.

Learn more

DNS failover

You can also use Route 53 health checks for DNS failover by associating health checks with any Route 53 DNS resource record set. This lets you route requests based on the health of your endpoints.

Learn more

we create one by adding the web server data

Create health check

Configure health check

Route 53 health checks let you track the health status of your resources, such as web servers or mail servers, and take action when an outage occurs.

Name	hctest
What to monitor	● Endpoint
	○ Status of other health checks (calculated health check)
	○ State of CloudWatch alarm

Monitor an endpoint

Multiple Route 53 health checkers will try to establish a TCP connection with the following resource to determine whether it's healthy. Learn more

Specify endpoint by	● IP address ○ Domain name
Protocol	HTTP
IP address *	3.71.101.99
Host name	www.firepass.eus
Port *	80
Path	/ images

▸ Advanced configuration

URL http://3.71.101.99:80/

As we can see, we are already monitoring the health

Name	Status	Description	Alarms	ID
hctest	15 minutes ago now Healthy	http://3.71.101.99:80/	No alarms configured.	260b42c0-914f-48fb-8a5d-92c967fbb66e

In the case of shutting down the server we see that it warns us that something is happening because the connection has been lost.

	Name	Status	Description	Alarms	ID	
☑	hctest	15 minutes ago — now Unhealthy	http://3.71.101.99:80/	No alarms configured.	260b42c0-914f-48fb-8a5d-92c967fbb66e	

Filter by keyword — 1 to 1 of 1 health check

Info | Monitoring | Alarms | Tags | **Health checkers** | Latency

● View current status   ○ View last failed check   ↻ Refresh

Health checker region	Health checker IP	Last checked	Status
Asia Pacific (Tokyo)	15.177.42.21	Jan 15, 2023 2:43:55 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...
Asia Pacific (Tokyo)	15.177.46.21	Jan 15, 2023 2:43:54 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...
Asia Pacific (Singapore)	15.177.50.23	Jan 15, 2023 2:43:56 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...
Asia Pacific (Singapore)	15.177.54.21	Jan 15, 2023 2:43:56 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...
Asia Pacific (Sydney)	15.177.62.21	Jan 15, 2023 2:43:56 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...
Asia Pacific (Sydney)	15.177.58.21	Jan 15, 2023 2:43:55 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...
EU (Ireland)	15.177.38.21	Jan 15, 2023 2:43:53 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...
EU (Ireland)	15.177.34.21	Jan 15, 2023 2:43:53 PM UTC	Failure: Connection timed out. The endpoint or the internet connecti...