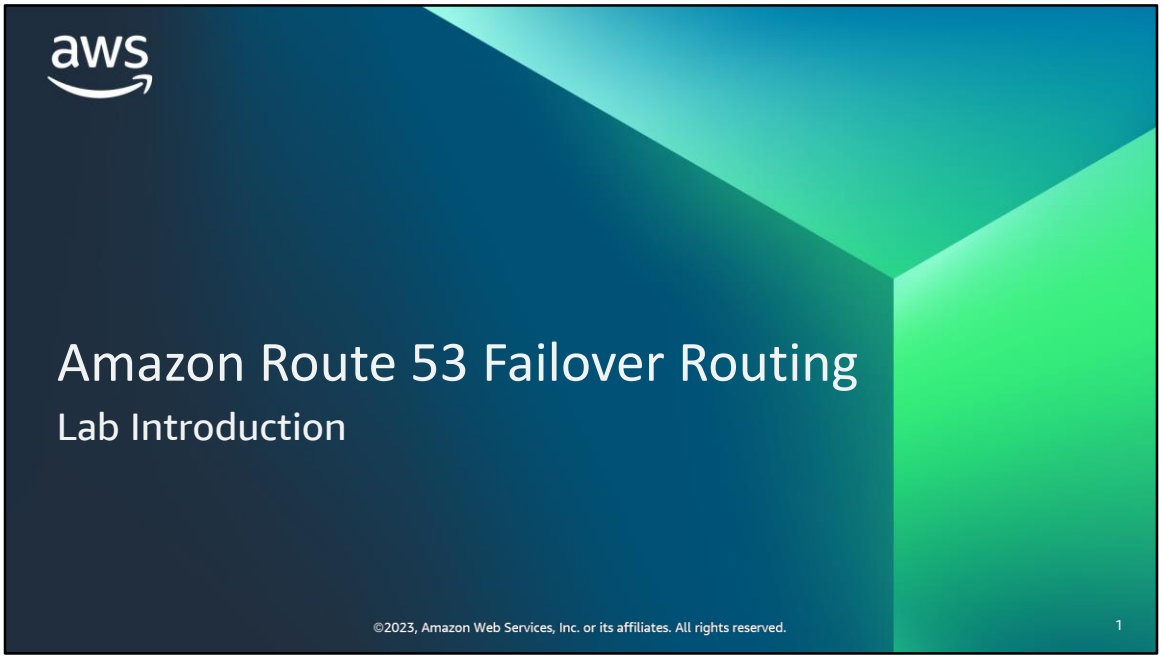


Amazon Route 53 Failover Routing

Lab Introduction

Business need: High availability

Frank:

Our website went down 2 days ago, and customers couldn't place any orders for most of the day. The customers were frustrated, and we lost some business revenue.

Sofía:

Yes, it took us a while to find the cause of the problem and correct it. We really need a solution that ensures that our website is always available and accessible to our customers.

aws

There have been many customers who have taken advantage of online ordering at the café. They like how placing the order online helps ensure that when they come to the café to pick up their orders, they receive the items that they want.

However, Frank mentions to Sofía that there was an incident 2 days ago when the website was inaccessible for most of the day. Customers expressed frustration that they could not place their orders online.

As a result, you have now been asked to make sure that this issue does not happen again.

Technical requirement: Use Amazon Route 53

Mateo:

Sofía, you can use Amazon Route 53 to solve your availability problem. Route 53 offers the ability to fail over to a second server running your website when the first server experiences problems.

Sofía:

Sounds like that's exactly the service that we need. Can you tell me more?

Sofía consulted Mateo on how to configure a backup deployment of the website so that if the main site goes down, the backup takes over. They would also like to be alerted when the primary site goes down so that they know about it.

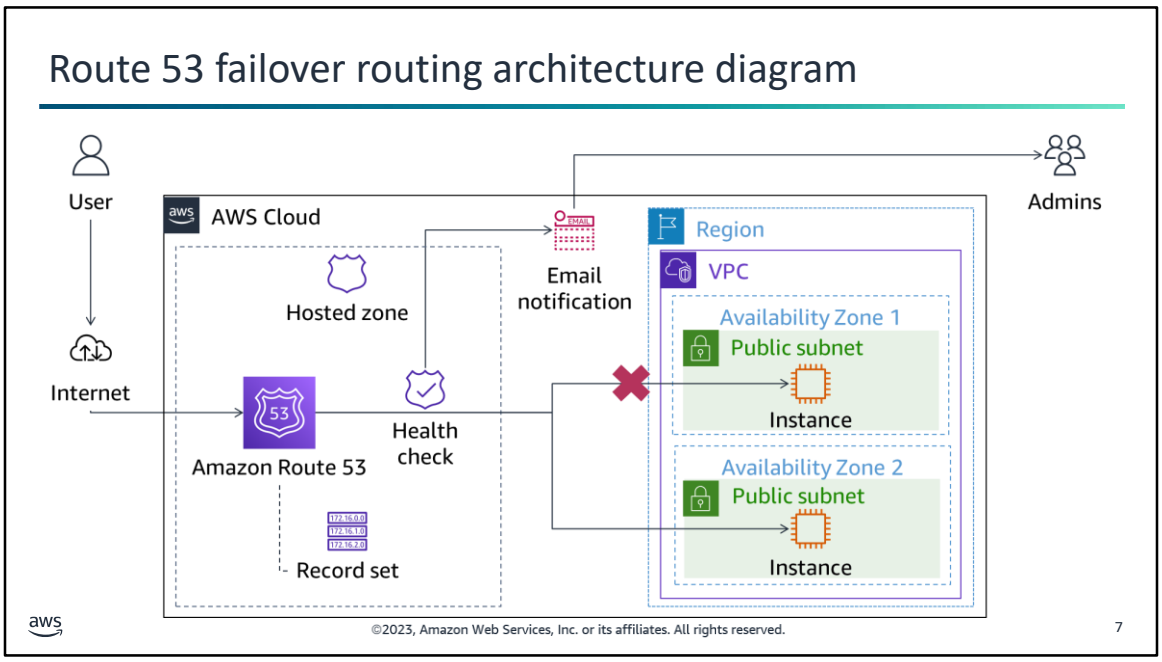
Mateo determines that Route 53 would meet the technical requirements for improving the availability of their website.

Lab tasks overview

In this lab, you will use the AWS Management Console to do the following:

- Configure a Route 53 health check that sends emails when the health of an HTTP endpoint turns unhealthy.
- Configure failover routing in Route 53.

After you complete this lab, clients will be notified in the event of a failure by Route 53 health checks, and traffic will be rerouted by failover routing configurations in Route 53.

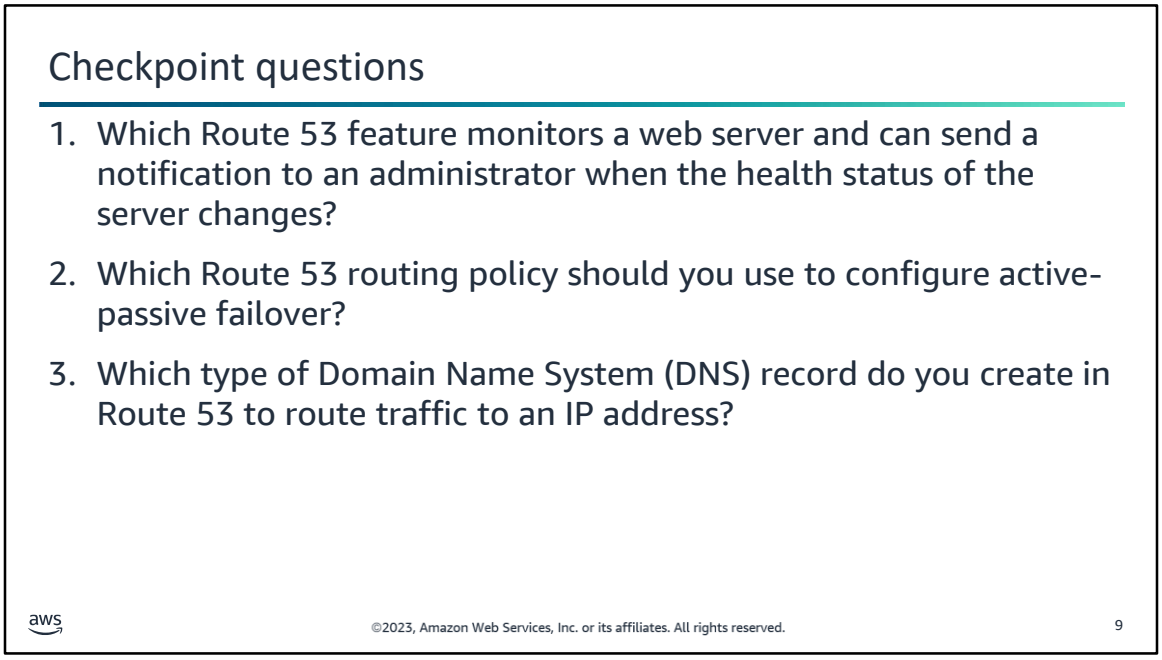


In this lab, the environment starts with two Amazon Elastic Compute Cloud (Amazon EC2) instances already created. Each instance has the full LAMP stack installed and the café website deployed and running. The EC2 instances are deployed in different Availability Zones. For example, if the web servers are running in the us-west-2 Region, then one of the web servers will run in the us-west-2a Availability Zone and the other one will run in the us-west-2b Availability Zone.

You will configure your domain such that, if the website in the primary Availability Zone becomes unavailable, Route 53 will automatically failover application traffic to the instance in the secondary Availability Zone.

When you are finished, your environment will look like the diagram on the slide. The diagram depicts how user traffic travels from the internet to Amazon Route 53. Amazon Route 53 health checks determine that the instance in Availability zone 1 is unhealthy. The user traffic is then simultaneously directed to an instance in Availability zone 2 while an email notification is sent to the administrators, informing them of the failed health check.

You can now begin the lab. Ask your instructor for help if you need it.

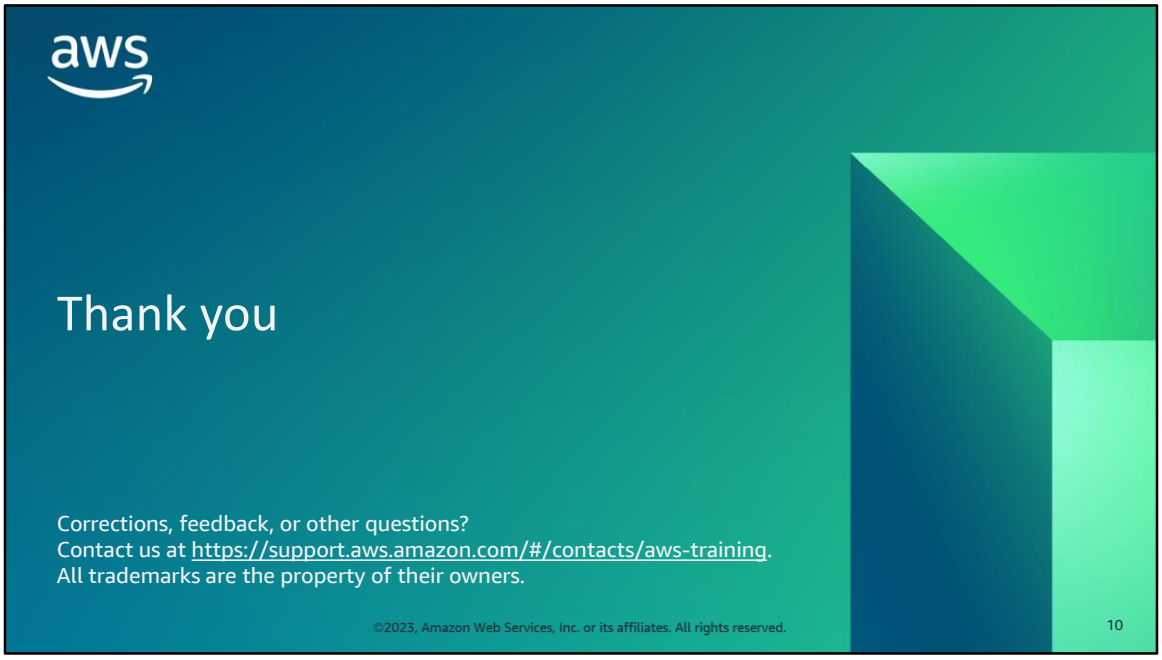


The answers to the questions are as follows:

1. Which Route 53 feature monitors a web server and can send a notification to an administrator when the health status of the server changes?
   A Route 53 health check

2. Which Route 53 routing policy should you use to configure active-passive failover?
   A failover routing policy

3. Which type of Domain Name System (DNS) record do you create in Route 53 to route traffic to an IP address?
   A type A DNS record



Thank you

Corrections, feedback, or other questions?
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