

## SUMMARY:

This Lab covers R53 and Failover Routing

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## 1. Using R53 and Failover Routing

This [DEMO] lesson steps through how to create Failover routing and private hosted zones.

Create stack:

**Stack name**

Stack name

DNSANDFAILOVERDEMO

Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

**Parameters**

Parameters are defined in your template and allow you to input custom values when you create or update a stack.


LatestAmild

AMI for EC2 (default is latest A

Saved to this PC

/aws/service/ami-amazon-linux-latest/amzn2-ami-hvm-x86\_64-gp2

**Capabilities**

 The following resource(s) require capabilities: [AWS::IAM::Role]

This template contains Identity and Access Management (IAM) resources that might provide entities access to make changes to your AWS account. Check that you want to create each of these resources and that they have the minimum required permissions. [Learn more](#)

☒ I acknowledge that AWS CloudFormation might create IAM resources.

Cancel

Create change set

Create stack

Set elastic IP:


EC2 > Elastic IP addresses > Associate Elastic IP address

## Associate Elastic IP address


Choose the instance or network interface to associate to this Elastic IP address (54.87.79.121)

**Elastic IP address: 54.87.79.121**


**Resource type**  
Choose the type of resource with which to associate the Elastic IP address.

☒ Instance 


☐ Network interface

 If you associate an Elastic IP address to an instance that already has an Elastic IP address associated, this previously associated Elastic IP address will be disassociated but still allocated to your account. [Learn more](#)


**Instance**




**Private IP address**  
The private IP address with which to associate the Elastic IP address.



**Reassociation**  
Specify whether the Elastic IP address can be reassociated with a different resource if it already associated with a resource.

☒ Allow this Elastic IP address to be reassociated 

Cancel Associate 

Create S3 bucket with files from demo folder, set permissions – json below

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicRead",
      "Effect": "Allow",
      "Principal": "*",
      "Action": ["s3:GetObject"],
      "Resource": ["arn:aws:s3:::examplebucket/*"]
    }
  ]
}
```

Create health check and test, use elastic IP from instance

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  ⓘ

IP address \*  ⓘ

Host name  ⓘ

Port \*  ⓘ

Path  ⓘ

▼ Advanced configuration

Request interval ☒ Standard (30 seconds) ☐ Fast (10 seconds) ⓘ

Failure threshold \*  ⓘ

String matching ☒ No ☐ Yes ⓘ

Latency graphs ☐ ⓘ

Invert health check status ☐ ⓘ

Disable health check ☐ By default, disabled health checks are considered healthy. [Learn more](#) ⓘ

Health checker regions ☐ Customize ☒ Use recommended ⓘ

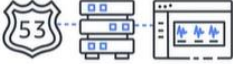
Name	Status	Description	Alarms	ID
A4LHEALTH	<div> <div></div> <div>15 minutes ago</div> <div>now</div> </div> <div>Healthy</div>	http://54.87.79.121:80/index.html	No alarms configured.	250a7704-25ed-445f


Create failover record:

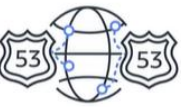
## Choose routing policy [Info](#)


The routing policy determines how Amazon Route 53 responds to queries.


**Routing policy** [Switch to quick create](#)


☐ **Simple routing**  
 Use if you're routing traffic to just one resource, such as a webserver.
 

☐ **Weighted**  
 Use when you have multiple resources that do the same job, and you want to specify the proportion of traffic that goes to each resource. For example: two or more EC2 instances.
 

☐ **Geolocation**  
 Use when you want to route traffic based on the location of your users.
 

☐ **Latency**  
 Use when you have resources in multiple AWS Regions and you want to route traffic to the Region that provides the best latency.
 

☒ **Failover**  
 Use to route traffic to a resource when the resource is healthy, or to a different resource when the first resource is unhealthy.
 

☐ **Multivalue answer**  
 Use when you want Route 53 to respond to DNS queries with up to eight healthy records selected at random.
 

Define failover record:

Route 53 > Hosted zones > animals4life.org > Create record

Step 1  
[Choose routing policy](#)

Step 2  
**Configure records**

## Configure records [Info](#)

You can create multiple records at a time that have the same routing policy.

**Basic configuration** [Info](#)

These configurations will remain the same for all resources created in this creation flow.

**Record name** [Info](#)  
 To route traffic to a subdomain, enter the subdomain name. For example, to route traffic to blog.example.com, enter *blog*. If you leave this field blank, the default record name is the name of the domain.

.animals4life.org

Valid characters: a-z, 0-9, ! " # \$ % & ' ( ) \* + , - / : ; < = > ? @ [ \ ] ^ \_ ` { | } . ~

**Record type** [Info](#)  
 The DNS type of the record determines the format of the value that Route 53 returns in response to DNS queries.

Choose when routing traffic to AWS resources for EC2, API Gateway, Amazon VPC, CloudFront, Elastic Beanstalk, ELB, or S3. For example: 192.0.2.44.

**TTL (seconds)** [Info](#)  
 The amount of time, in seconds, that DNS resolvers and web browsers cache the settings in this record. ("TTL" means "time to live.")

Recommended values: 60 to 172800 (two days)

## Define failover record

US East (N. Virginia) [us-east-1]

s3-website-us-east-1.amazonaws.com

**Failover record type**

Choose **Primary** to route traffic to the specified resource by default or **Secondary** to route traffic to the specified resource when the primary resource is unavailable. You can create only one failover record of each type.

Secondary

**Health check - optional**

Choose the health check that you want Route 53 to use to determine whether this record set is healthy. You can create a health check in the [health check console](#).

Choose health check

**Evaluate target health**

Select Yes if you want Route 53 to use this record to respond to DNS queries only if the specified AWS resource is healthy.

☐ No

**Record ID**

Enter a unique description that differentiates this record from other records with the same name and type.

S3

Cancel
Define failover record

Stop and start instance and check for failover:

Dashboard
Hosted zones
**Health checks**
Traffic flow
Traffic policies
Policy records

Name	Status	Description	Alarms	ID
<input checked="" type="checkbox"/> A4LHEALTH	17 minutes ago 2 minutes ago <b>Unhealthy</b>	http://54.87.79.121:80/index.html	No alarms configured.	250a7704-25ed-4456-

Dashboard
Hosted zones
**Health checks**
Traffic flow
Traffic policies
Policy records

Name	Status	Description	Alarms	ID
<input type="checkbox"/> A4LHEALTH	15 minutes ago <b>now</b> <b>Healthy</b>	http://54.87.79.121:80/index.html	No alarms configured.	250a7704-25ed-4456-