Setting Up Amazon SNS for System Failure Notifications and Route 53

Name: T MANOJ

Overview:

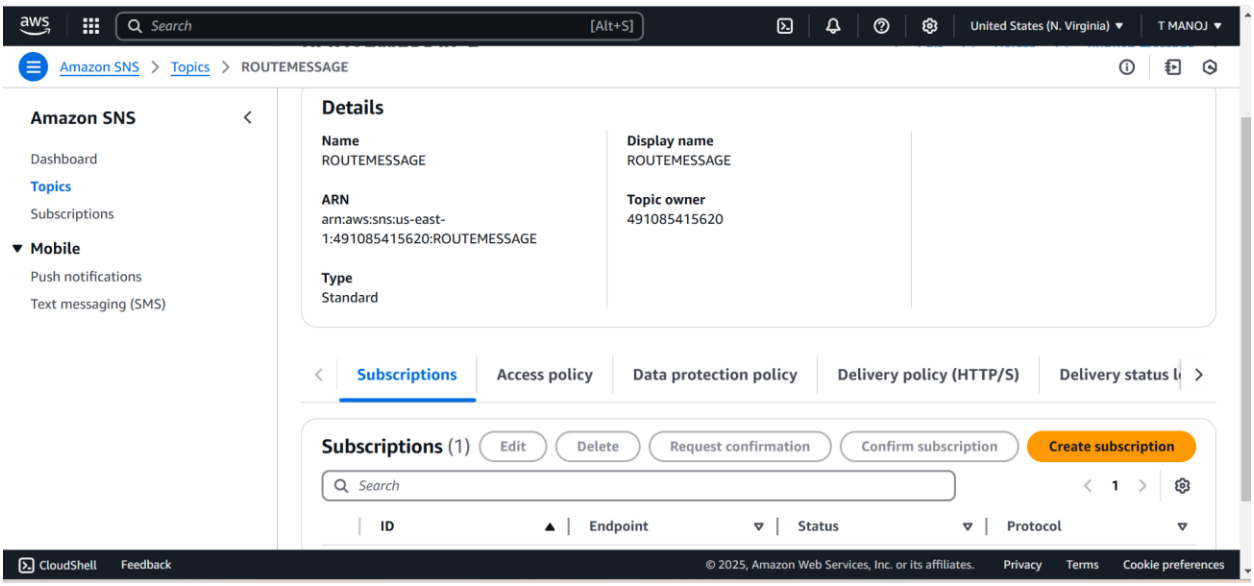
This document provides a step-by-step guide to configuring Amazon Simple Notification Service (SNS), CloudWatch Alarms, and Route 53 Failover to send email notifications when a system becomes unhealthy.

Step 1: Create an SNS Topic for Email Notifications

1. Sign in to AWS Console and go to Amazon SNS.
2. Click on Topics - Create topic.
3. Choose Standard as the type and enter a Topic name
4. Click Create topic.

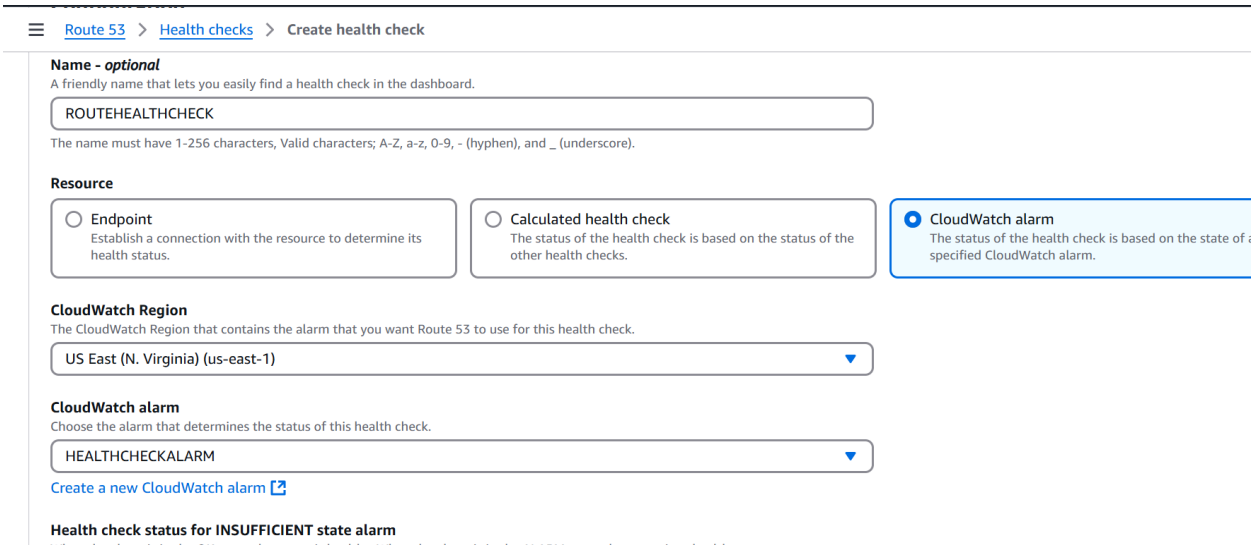
Subscribe an Email to SNS

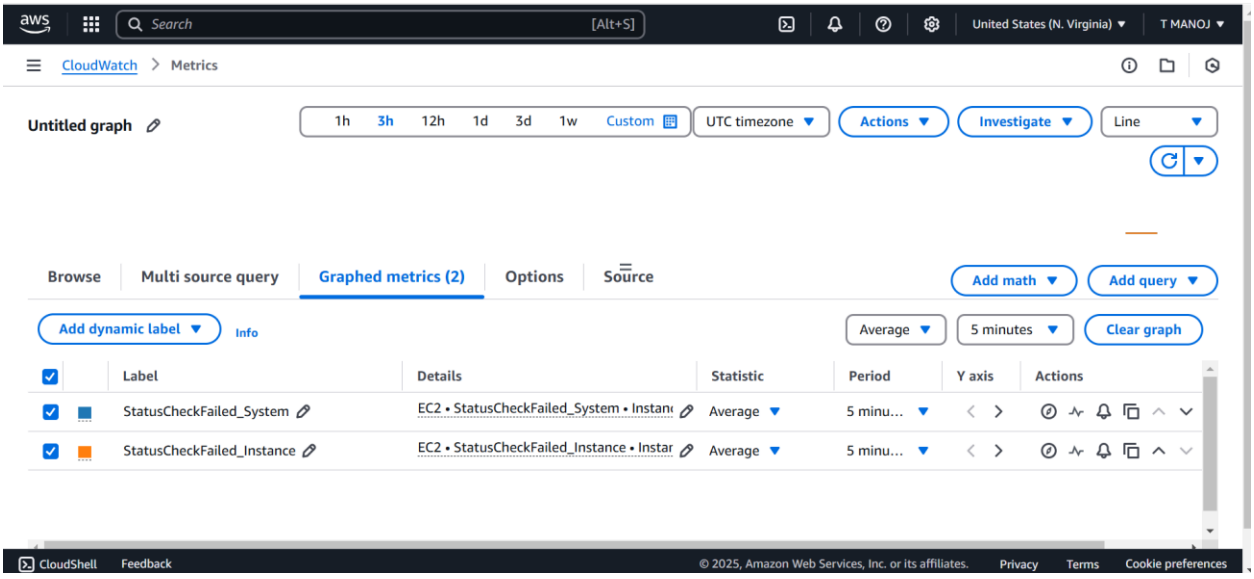
1. Select the created SNS topic (SystemFailureAlerts).
2. Click Create subscription.
3. Protocol: Choose Email.
4. Endpoint: Enter your email address (dreamers2k22@gmail.com).
5. Click Create subscription.
6. Check your email and confirm the subscription by clicking the link in the email.



Step 2: Create a CloudWatch Alarm for System Health Monitoring

1. Navigate to Amazon CloudWatch.
2. Click on Alarms - Create alarm.
3. Select the appropriate EC2 instance metric
4. Set a threshold .
5. Under Actions, choose Send notification to an SNS topic.
6. Select the SNS topic SystemFailureAlerts.
7. Click Create Alarm.


Route 53 > Health checks > Create health check
Name - optional
A friendly name that lets you easily find a health check in the dashboard.
ROUTEHEALTHCHECK
The name must have 1-256 characters, Valid characters; A-Z, a-z, 0-9, - (hyphen), and _ (underscore).
Resource
Endpoint
Establish a connection with the resource to determine its health status.
Calculated health check
The status of the health check is based on the status of the other health checks.
CloudWatch alarm
The status of the health check is based on the state of a specified CloudWatch alarm.
CloudWatch Region
The CloudWatch Region that contains the alarm that you want Route 53 to use for this health check.
US East (N. Virginia) (us-east-1)
CloudWatch alarm
Choose the alarm that determines the status of this health check.
HEALTHCHECKALARM
Create a new CloudWatch alarm
Health check status for INSUFFICIENT state alarm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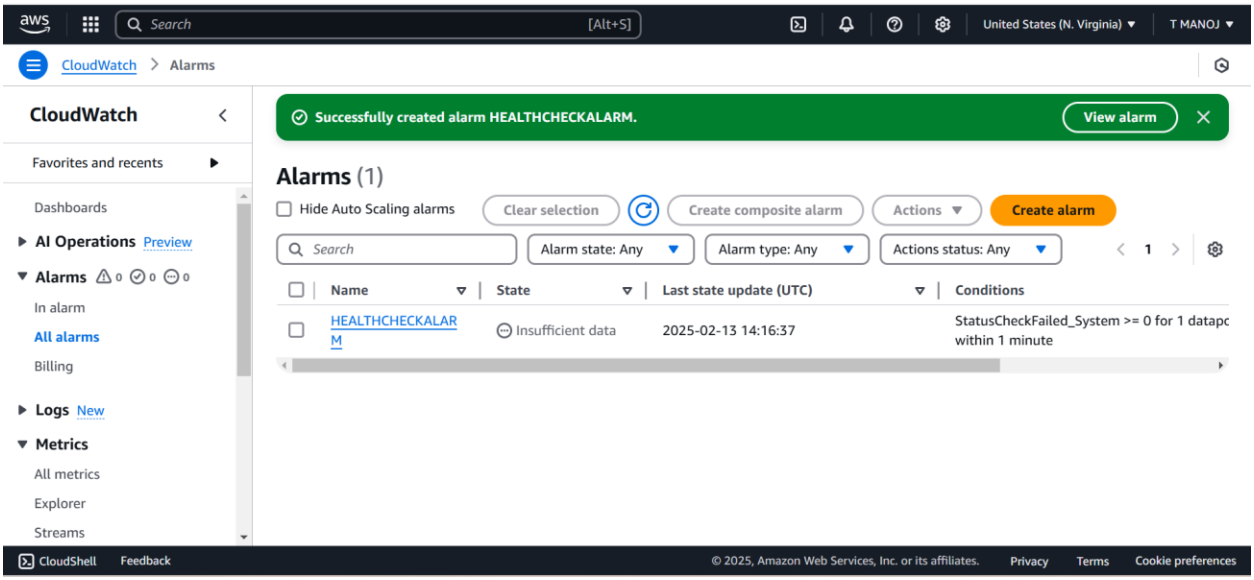


Step 3: Configure Route 53 Failover and Health Check

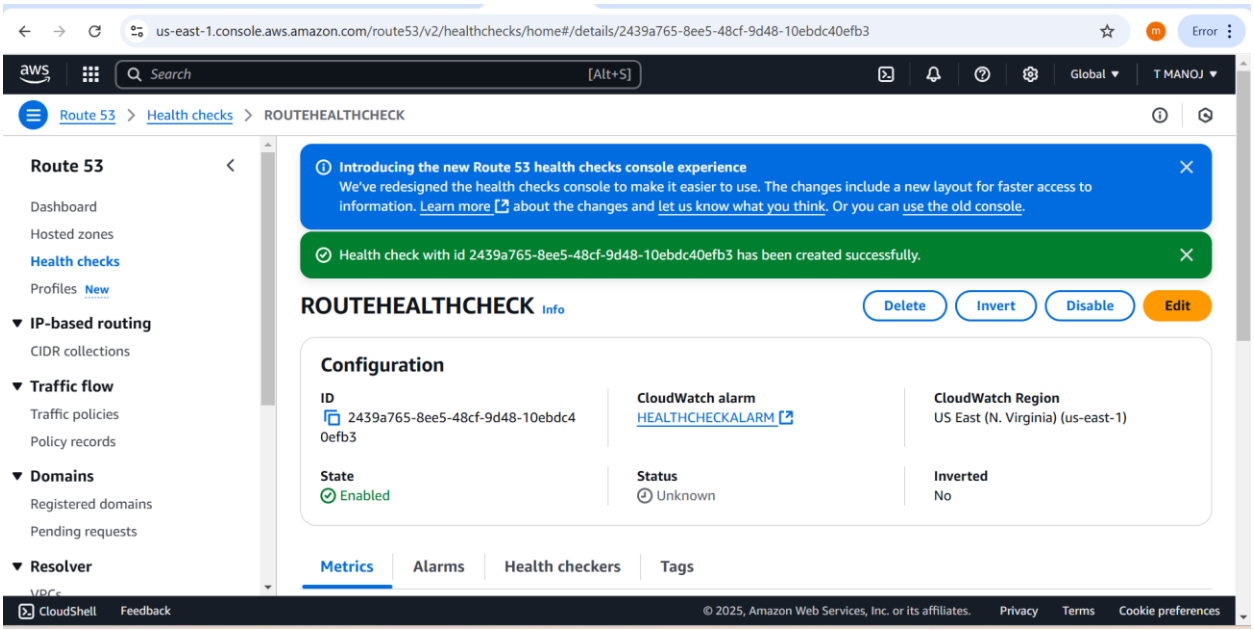
Create a Health Check

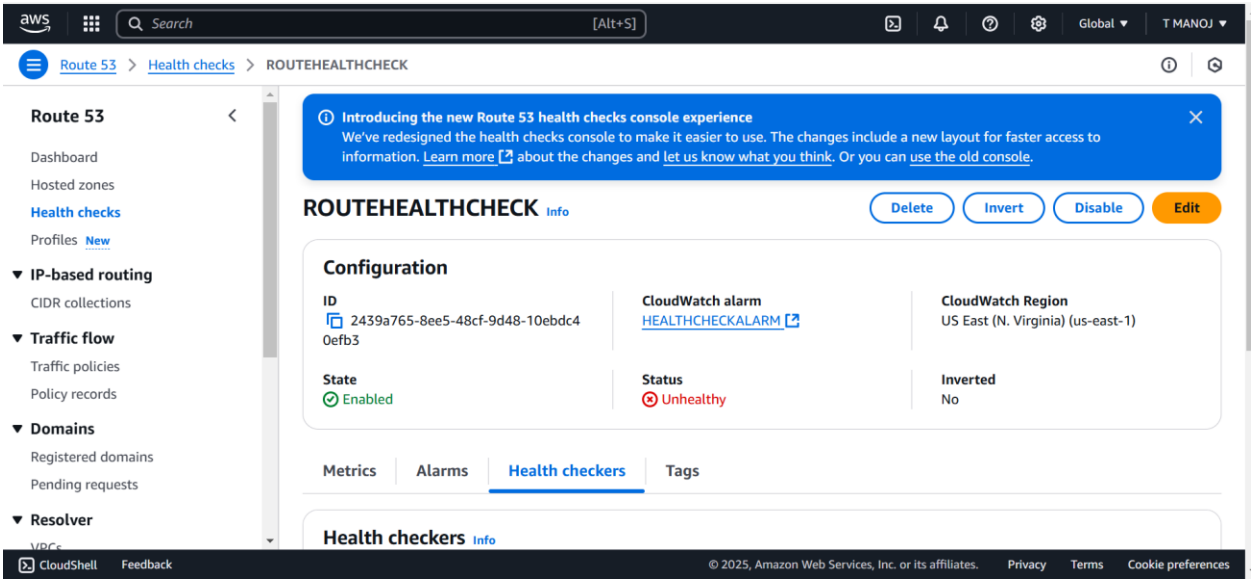
1. Go to Route 53 -Health Checks - Create health check.
2. Provide a Health check name
3. Set the Endpoint type .
4. Enter the IP address or domain of the system to monitor.
5. Set failure thresholds and request intervals.
6. Choose Create alarm and attach it to the SNS topic.
7. Click Create health check.

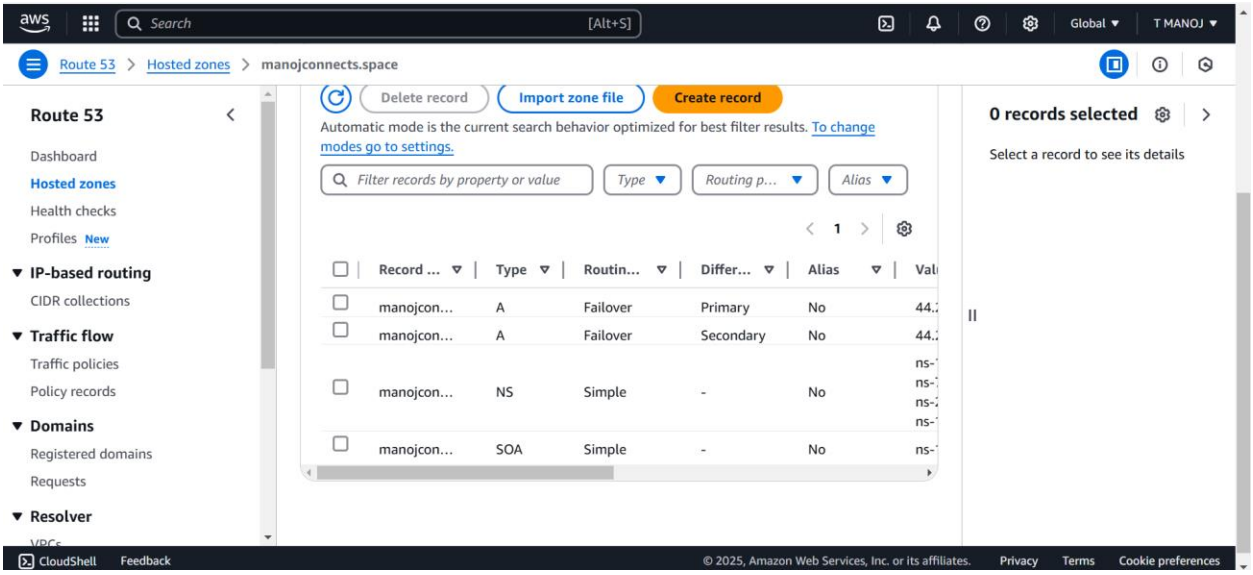
Set Up Failover Records in Route 53

1. Navigate to Route 53 > Hosted Zones.
2. Click on the domain name.
3. Click Create record.

4. Choose A type record .
5. Under Routing Policy, select Failover.
6. Choose Primary record and link it to a healthy endpoint.
7. Create another record as the Secondary failover pointing to a backup system.
8. Associate both records with the previously created Health Check
9. Click Create records.

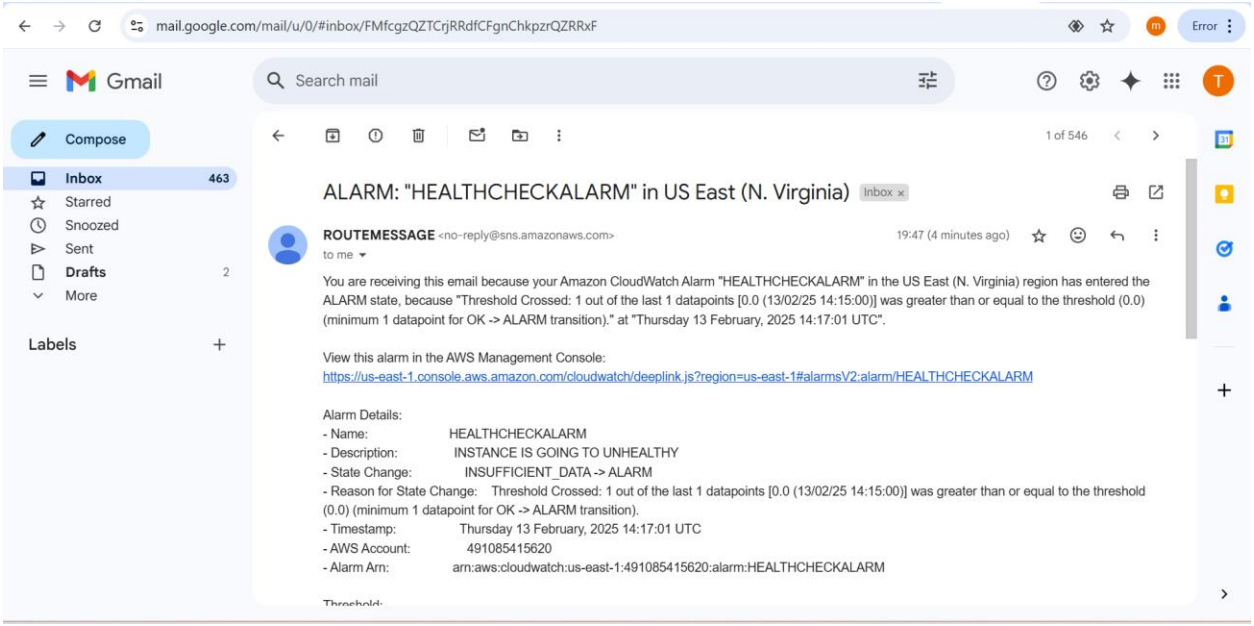






Step 4: Testing and Monitoring

1. Terminate one System
2. Route 53 should detect the unhealthy status and switch to the secondary system.
3. CloudWatch should trigger an alarm and send an email notification via SNS.
4. Verify that Route 53 has switched traffic to the backup system.



This Is

Command Prompt

```
C:\Users\T Manoj>nslookup manojconnects.space
Server:  UnKnown
Address:  192.168.131.181

Non-authoritative answer:
Name:    manojconnects.space
Address:  100.24.3.86


C:\Users\T Manoj>nslookup manojconnects.space
Server:  UnKnown
Address:  192.168.131.181

Non-authoritative answer:
Name:    manojconnects.space
Address:  100.24.3.86


C:\Users\T Manoj>
```

Conclusion

This setup ensures automatic failover in Route 53 and email notifications via SNS when the primary system fails.,Secondary Start running and assings the IP of this system.