AWS EC2 Route Table Disruption

Standard Operating Procedure (SOP)

Overview

This SOP outlines the process for programmatically adding an Internet Gateway to an EC2 route table in AWS using Python. It includes the validation steps, the creation of the route, and post-configuration tasks.

Platform

AWS

Code Language

Python

Required Dependencies

- boto3
- AWS SDK for Python

Credentials Required

- AWS_ACCESS_KEY_ID
- AWS_SECRET_ACCESS_KEY
- AWS_REGION

Input Parameters

1. route_table_id
    - Type: String
    - Description: The unique ID of the EC2 Route Table to modify.
    - Required: true
    - Default: null
    - Validation Rules: Must be a valid Route Table ID (e.g., rtb-xxxxxxxx).

2. region
    - type: string
    - description: region associated with ec2 route table
    - required: true

- default: null

Logic Flow

1. Pre-Creation Validation
    - Validate AWS credentials
    - Validate EC2 instance ID
    - Validate Route Table ID
    - Validate Internet Gateway ID
    - Validate Destination CIDR Block
        - To Ensure the destination CIDR block is correctly formatted (e.g., 0.0.0.0 /0 for all traffic)

1. Post-Creation Configuration
    - Verify Route Addition
    - Log Action
2. Error Handling Scenarios
    - Invalid Route Table ID
    - Invalid Internet Gateway
    - Insufficient Permissions

Success Criteria

- The route is successfully added to the route table.
- The route directs traffic (e.g., 0.0.0.0/0) to the Internet Gateway.
- Action is logged for auditing purposes.
- The route appears in the Route Table's list of routes.

Monitoring Considerations

- Verify Route Addition
- Audit Logs
- Monitor Network Traffic

Tags

- Aws
- route -table
- internet -gateway
- networking
- ec2