AWS EC2 Route Table Disruption

Standard Operating Procedure (SOP)

Overview

This SOP outlines the process for programmatically adding an Internet Gateway to an EC2 r oute table in AWS using Python. It includes the validation steps, the creation of the route, a nd 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. instance_id
    - Type: String
    - Description: The EC2 instance ID to associated with the Internet gateway.
    - Required: true
    - Default: null
    - Validation Rules:
        - Must be a valid instance ID.

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
        - Ensure the destination CIDR block is correctly formatted (e.g., 0.0.0.0 /0 for all traffic)

2. Post-Creation Configuration

    - Verify Route Addition
    - Log Action

3. 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