**AWS EC2 Memory Utilization**

**Standard Operating Procedure (SOP)**

**Overview**

This SOP outlines the process for monitoring EC2 instance memory utilization on AWS  using CloudWatch. It includes steps to retrieve memory utilization metrics, set up  CloudWatch alarms for high memory usage, and take actions based on those alarms.  
  
**2. 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. host\_ip

Type: String  
  Description: The unique IP of the EC2 instance to monitor  
  Required: true  
  Default: ip-12-0-1-195

**Logic Flow**

1. Pre-Creation Validation

* Validate AWS credentials
* Validate EC2 Host IP

1. Post-Creation Configuration

* Verify Alarm Creation
* Log Action
* Validate all the processes mentioned are terminated

1. Error Handling Scenarios  
   * Invalid EC2 Host IP
   * Insufficient Permissions

**Success Criteria**

* Memory utilization metrics are retrieved successfully from CloudWatch.
* CloudWatch alarm is created to monitor memory utilization.
* Action is triggered when the alarm condition is met (e.g., send email/SNS notification).
* Logs indicate the successful creation and configuration of the alarm.

**Monitoring Considerations**

* Monitor Alarm Status
* Review Memory Metrics
* Monitor Alarm Actions

**Tags**

* aws
* ec2
* cloudwatch
* memory-utilization
* monitoring
* alarm