**AWS EC2 CPU Utilization**

**Standard Operating Procedure (SOP)**

**Overview**

This SOP outlines the process for monitoring and managing EC2 CPU utilization on AWS. It  includes steps for retrieving CPU utilization metrics from CloudWatch, setting up alarms  for high CPU usage, and optimizing EC2 instances to ensure optimal performance.  
  
**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. instance\_id

Type: String  
  Description: The unique ID of the EC2 instance to monitor  
  Required: true  
  Default: [i-0854edc8c9bc21c94](https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#InstanceDetails:instanceId=i-0854edc8c9bc21c94)

**Logic Flow**

1. Pre-Creation Validation

* Validate AWS credentials
* Validate EC2 Instance ID

1. Post-Creation Configuration

* Verify Alarm Creation
* Log Action

1. Error Handling Scenarios  
   * Invalid EC2 Instance ID
   * Insufficient Permissions

**Success Criteria**

* CPU utilization metrics are retrieved successfully from CloudWatch.
* CloudWatch alarm is created to monitor CPU 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
* Verify Alarm Actions
* Review CPU Metrics

**Tags**

* Aws
* ec2
* cloudwatch
* cpu-utilization
* monitoring
* alarm