**Step-by-Step Guide to Install and Configure CloudWatch Agent**

**1. Create an IAM Role with CloudWatch Full Access**

1. **Sign in to the AWS Management Console.**
2. **Navigate to the IAM Console:**
   * Go to the IAM dashboard.
3. **Create a Role:**
   * Click on **Roles** in the left navigation pane.
   * Click on **Create role**.
4. **Select Use Case:**
   * Select **AWS service**.
   * Choose **EC2** and click **Next**.
5. **Attach Permissions Policies:**
   * Search for and select **CloudWatchAgentServerPolicy**.
   * Click **Next**.
6. **Add Tags (Optional):**
   * Add tags if needed, then click **Next**.
7. **Name the Role:**
   * Give your role a name, e.g., CloudWatchAgentRole.
   * Click **Create role**.

**2. Attach the IAM Role to Your EC2 Instance**

1. **Navigate to the EC2 Console:**
   * Go to the EC2 dashboard.
2. **Select Your Instance:**
   * Select the instance you want to monitor with CloudWatch.
3. **Modify the IAM Role:**
   * Click on **Actions** > **Security** > **Modify IAM Role**.
   * Select the IAM role you created (CloudWatchAgentRole).
   * Click **Update IAM role**.

**3. Install the CloudWatch Agent**

1. **Connect to Your Instance:**
   * Use SSH to connect to your EC2 instance.
2. **Download the CloudWatch Agent:**

wget https://s3.amazonaws.com/amazoncloudwatch-agent/ubuntu/amd64/latest/amazon-cloudwatch-agent.deb

1. **Install the CloudWatch Agent:**

sudo dpkg -i amazon-cloudwatch-agent.deb

**4. Create and Configure the CloudWatch Agent Configuration File**

1. **Open the Configuration File:**

sudo nano /opt/aws/amazon-cloudwatch-agent/etc/amazon-cloudwatch-agent.json

1. **Add the Following Content to the File:**

{

"agent": {

"metrics\_collection\_interval": 60,

"run\_as\_user": "root"

},

"metrics": {

"append\_dimensions": {

"InstanceId": "${aws:InstanceId}"

},

"metrics\_collected": {

"cpu": {

"measurement": [

"cpu\_usage\_idle",

"cpu\_usage\_iowait",

"cpu\_usage\_user",

"cpu\_usage\_system"

],

"metrics\_collection\_interval": 60

},

"mem": {

"measurement": [

"mem\_used\_percent"

],

"metrics\_collection\_interval": 60

}

}

},

"logs": {

"logs\_collected": {

"files": {

"collect\_list": [

{

"file\_path": "/var/log/syslog",

"log\_group\_name": "syslog",

"log\_stream\_name": "{instance\_id}"

}

]

}

}

}

}

1. **Save and Exit:**
   * Save the file and exit the editor (Ctrl + O to save, Ctrl + X to exit in nano).

**5. Start and Enable the CloudWatch Agent**

1. **Start the CloudWatch Agent:**

sudo systemctl start amazon-cloudwatch-agent

1. **Enable the CloudWatch Agent to Start on Boot:**

sudo systemctl enable amazon-cloudwatch-agent

1. **Check the Status of the CloudWatch Agent:**

sudo systemctl status amazon-cloudwatch-agent