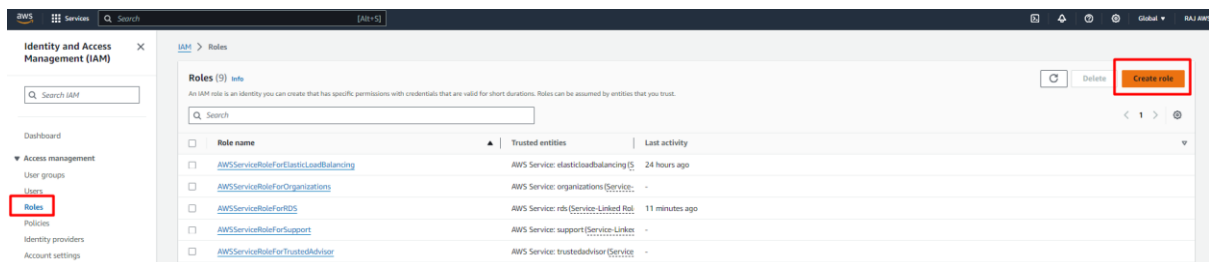


Install CloudWatch agent in Linux EC2 Instance - enable Memory and Storage metrics

STEP 1: Create a IAM role

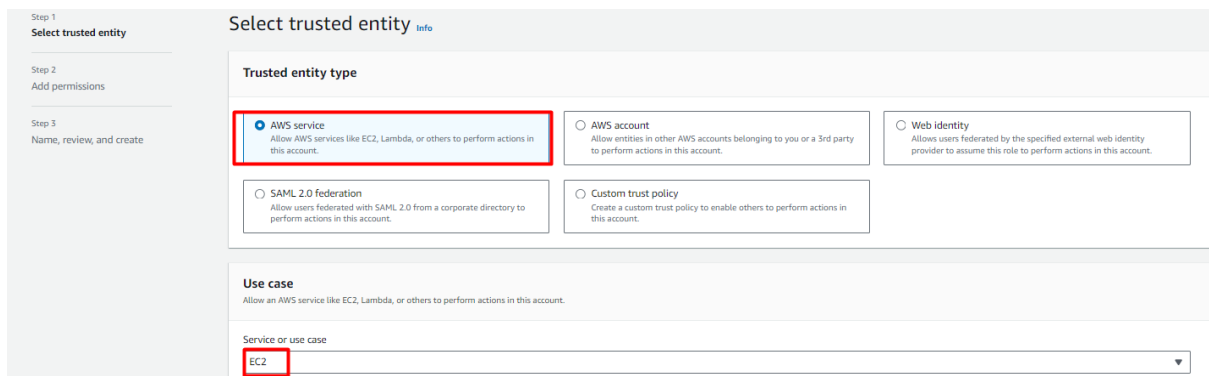
- Go to IAM
- On the Left Side of the screen search for Roles
- Then Click on Create Role



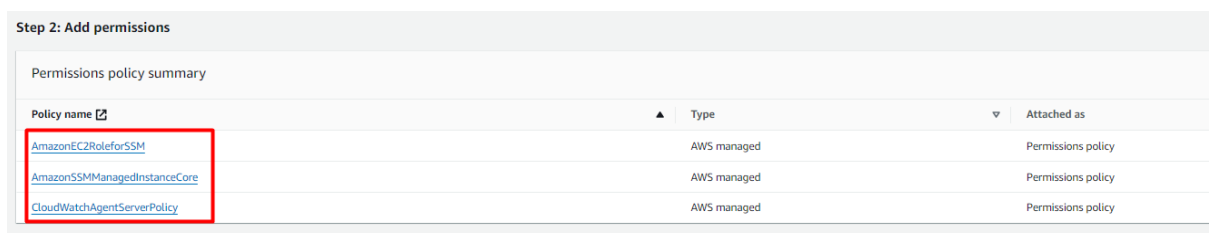
As we want to use this role inside the This Account

We will choose AWS service

Now we want this Role Applicable for EC2 Instance So we will Choose EC2



- Then Click on next
- Now Attach policy (permission) :
 - “ AmazonEC2RoleforSSM
 - AmazonSSMMangedInstanceCore
 - CloudWatchAgentServerPolicy “



- Then Click on Next
- Enter Name of the Role and Create this Role

Name, review, and create

Role details

Role name
Enter a meaningful name to identify this role.

ROLE-FOR-CLOUDWATCH

Maximum 64 characters. Use alphanumeric and '+=, @-_' characters.

- Hence, we have Created a IAM Role.

STEP 2: Create a EC2 Instance

- Create a Ec2 Instance using AMI as Linux Kernal 2,
- Then Set a Security Grp with SSH at Anywhere,
- Create a Key pair,
- Then In Advance Setting,
- Scroll down to IAM instance Profile,
- There Attach your IAM role “ ROLE-FOR-CLOUDWATCH ”

▼ Advanced details [Info](#)

Domain join directory [Info](#)

Select [Create new directory](#)

IAM instance profile [Info](#)

Select [Create new IAM profile](#)

ROLE-FOR-CLOUDWATCH
arn:aws:iam::211125722329:instance-profile/ROLE-FOR-CLOUDWATCH

☒ Enable IP name IPv4 (A record) DNS requests
☐ Enable resource-based IPv4 (A record) DNS requests
☐ Enable resource-based IPv6 (AAAA record) DNS requests

Instance auto-recovery [Info](#)

Select

- And create the Ec2 Instance,
- Hence we have created the Ec2 Instance.

STEP 3: Configure Metrix In your Linux Server

- Now connect to the server
- Command use to Configure :

```
# sudo yum install amazon-cloudwatch-agent -y
```

#this command will use to install cloudwatch agent

```
[ec2-user@ip-172-31-47-49 ~]$ sudo yum install amazon-cloudwatch-agent -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
--> Package amazon-cloudwatch-agent.x86_64 0:1.300033.0-1.amzn2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
 Package                                                    Arch
=====
Installing:
  amazon-cloudwatch-agent                                   x86_64
Transaction Summary
=====
```

```
# sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-config-wizard
```

// this command will us to configure the metrics in the linux server

```
[ec2-user@ip-172-31-47-49 ~]$ sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-config-wizard
=====
Welcome to the Amazon CloudWatch Agent Configuration Manager
=====
CloudWatch Agent allows you to collect metrics and logs from
your host and send them to CloudWatch. Additional CloudWatch
charges may apply.
=====
On which OS are you planning to use the agent?
1. linux
2. windows
3. darwin
default choice: [1]:
```

- Choose option as 1.

```
Trying to fetch the default region based on ec2 metadata...
If aws retry client will retry 1 timesAre you using EC2 or On-Premises hosts?
1. EC2
2. On-Premises
default choice: [1]:
1
Which user are you planning to run the agent?
1. current
2. root
3. others
default choice: [1]:
1
Do you want to turn on StatsD daemon?
1. yes
2. no
default choice: [1]:
1
Which port do you want StatsD daemon to listen to?
default choice: (8125)
What is the collect interval for StatsD daemon?
1. 10s
2. 30s
3. 60s
default choice: [1]:
1
What is the aggregation interval for metrics collected by StatsD daemon?
1. Do not aggregate
2. 10s
3. 30s
4. 60s
default choice: [4]:
Do you want to monitor metrics from CollectD? WARNING: CollectD must be installed or the Agent will fail to start
1. yes
2. no
default choice: [1]:
```

- Choose everything as default for all

- But at CollectD put value as 2 // as we don't want to install this at the server

```

Do you want to monitor metrics from CollectD? WARNING: CollectD must be installed or the Agent will fail to start
1. yes
2. no
default choice: [1]:
2
Do you want to monitor any host metrics? e.g. CPU, memory, etc.
1. yes
2. no
default choice: [1]:
1
Do you want to monitor cpu metrics per core?
1. yes
2. no
default choice: [1]:
1
Do you want to add ec2 dimensions (ImageId, InstanceId, InstanceType, AutoScalingGroupName) into all of your metrics if the info is available?
1. yes
2. no
default choice: [1]:
1
Do you want to aggregate ec2 dimensions (InstanceId)?
1. yes
2. no
default choice: [1]:
1
Would you like to collect your metrics at high resolution (sub-minute resolution)? This enables sub-minute resolution for all metrics, but you can customize for specific metrics in the output json file.
1. 1s
2. 10s
3. 30s
4. 60s
default choice: [4]:

```

- Then choose Everything as default
- But wait at which metric you want,
- Choose Option as 2 Standard
- When we come to monitor log file
- Log file path: /var/log/messages
- Log Group : eg: cwagentforec2instnace
- Log stream : BE default
- Log Group retention choose 1 day for the example purpose
- Enter n ,n ,n
- Hence the proses is completed

STEP 4 : Use this command to start and to see the status :

```
# sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-ctl -m ec2 -a start
```

// this command will start the function eun

```
# sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-ctl -m ec2 -a status
```

// this Commad will show the Status of the agent

```

[ec2-user@ip-172-31-47-49 ~]$ sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-ctl -m ec2 -a start

***** processing amazon-cloudwatch-agent *****
amazon-cloudwatch-agent is not configured. Applying amazon-cloudwatch-agent default configuration.
I! Trying to detect region from ec2 D! [EC2] Found active network interface I! imds retry client will retry 1 timesSuccessfully fetched the config and saved
udwatch-agent.d/default.tmp
Start configuration validation...
2024/04/14 14:00:18 Reading json config file path: /opt/aws/amazon-cloudwatch-agent/etc/amazon-cloudwatch-agent.d/default.tmp ...
2024/04/14 14:00:18 I! Valid json input schema.
2024/04/14 14:00:18 D! ec2tagger processor required because append_dimensions is set
2024/04/14 14:00:18 D! pipeline hostDeltaMetrics has no receivers
2024/04/14 14:00:18 Configuration validation first phase succeeded
I! Detecting run as user...
I! Trying to detect region from ec2
D! [EC2] Found active network interface
I! imds retry client will retry 1 times
/opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent -schematest -config /opt/aws/amazon-cloudwatch-agent/etc/amazon-cloudwatch-agent.toml
Configuration validation second phase succeeded
Configuration validation succeeded
Created symlink from /etc/systemd/system/multi-user.target.wants/amazon-cloudwatch-agent.service to /etc/systemd/system/amazon-cloudwatch-agent.service.

[ec2-user@ip-172-31-47-49 ~]$ sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-ctl -m ec2 -a status
{
  "status": "running",
  "starttime": "2024-04-14T14:00:17+0000",
  "configstatus": "configured",
  "version": "1.300033.0"
}
[ec2-user@ip-172-31-47-49 ~]$

```

i-0e000e3615c212318 (LINUX METRIX)

STEP 4: Check this in Cloudwatch metric

- Go to EC2 and Copy the Instance ID of the Linux server
- Then go to CloudWatch
- Then go to Metric
- And paste the ID in the Search bar

The screenshot shows the AWS Management Console. At the top, the 'Instances' page displays a table with one instance: 'LINUX METRIX' with ID 'i-0e000e3615c212318', state 'Running', type 't2.micro', and status '2/2 checks passed'. Below this, the 'Instance: i-0e000e3615c212318 (LINUX METRIX)' details are shown. The 'Instance ID' is highlighted with a red box and labeled 'Instance ID copied'. Other details include 'Public IPv4 address' (52.66.207.255), 'Instance state' (Running), and 'Private IP DNS name' (ec2-52-66-207-255.ap-south-1.compute.amazonaws.com). Below the instance details, the 'CloudWatch' console is open. The 'Metrics' section is active, and the 'All metrics' option is highlighted with a red box. The search bar contains the instance ID 'i-0e000e3615c212318', which is also highlighted with a red box. Below the search bar, the 'Custom namespaces' section shows a list of metrics: 'CWAgent > Imageld, InstanceId, InstanceType, device, fstype, path' with a count of 7, and 'CWAgent > Imageld, InstanceId, InstanceType' with a count of 1. This list is highlighted with a red box. Below this, the 'AWS namespaces' section shows 'EC2 > Per-Instance Metrics' with a count of 17.

- Hence we can see the Linux Server has its Disk Utilization and Memory Utilization metric in the CloudWatch.

Reference Link :

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/install-CloudWatch-Agent-on-EC2-Instance-fleet.html>