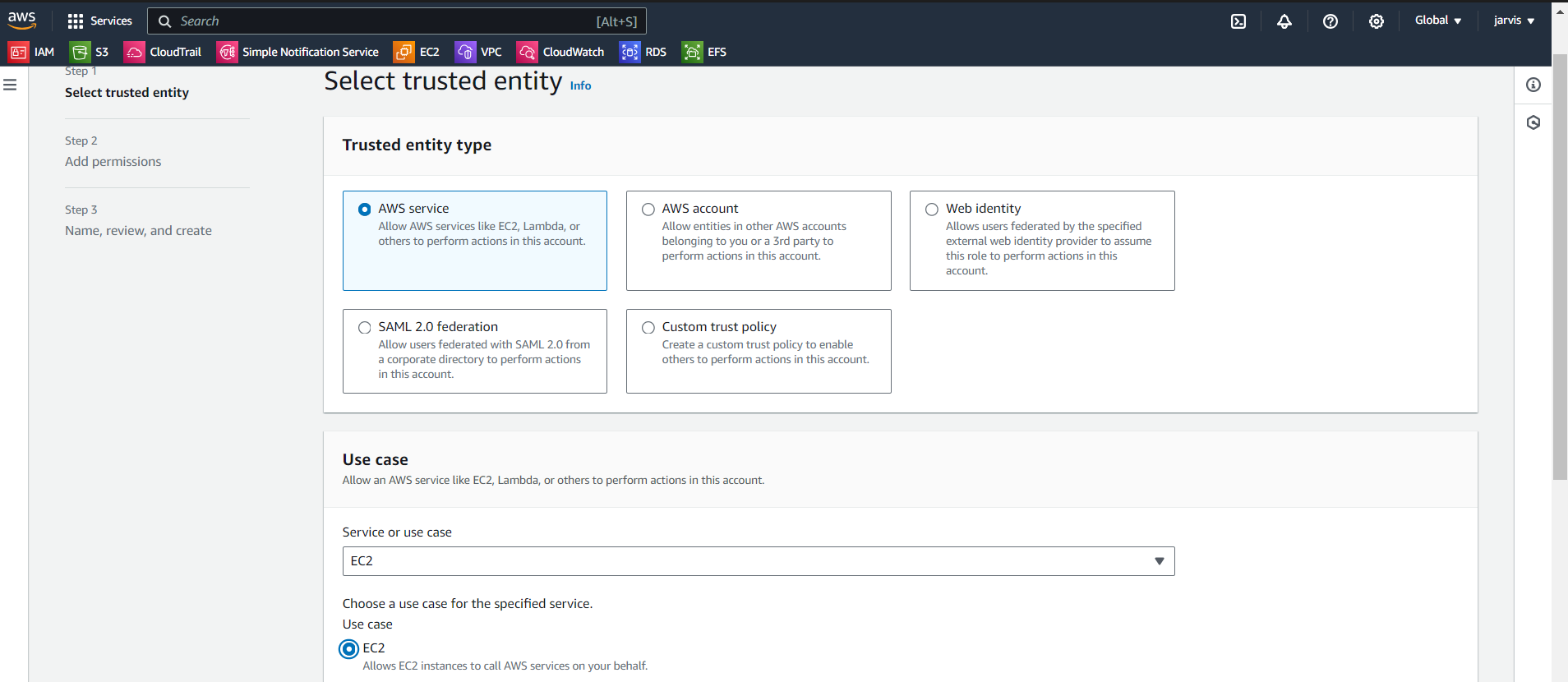
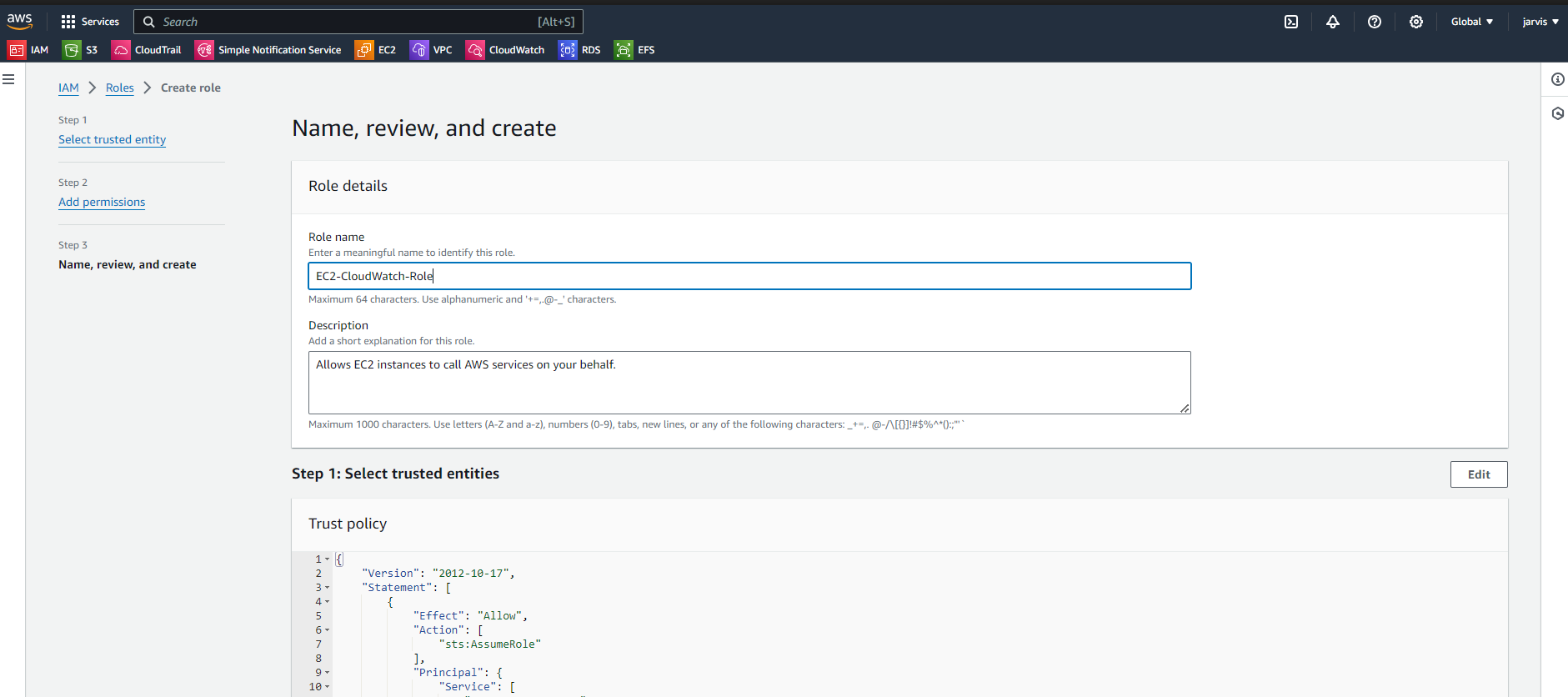
**Task: Setting up AWS CloudWatch to monitor EC2 Instance.**

Here will setup the CloudWatch Dashboard for EC2 Instance’s (CPU, Memory, Disk metrics), for that we need to install AWS Cloud Agent using Perl script & SSM.

Step 1: Create an AWS EC2 IAM Role and add CloudWatch and SSM Full Access. - Role Name: EC2-CloudWatch-Role. \



Permission: CloudWatch and SSM Full Access



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Description automatically generated

Step 2: Create a Parameter in Systems Manager with the name "/alarm/AWS-CWAgentLinConfig" and store the value. \

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Description automatically generated

Here in AWS System manager, we can store our required parameters, for wow we need to create an separate parameter.

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Description automatically generated

Mention the type (string) and its value,

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The required parameter has been stored successfully in AWS System Manager.

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**## Value for the SSM Parameter (/alarm/AWS-CWAgentLinConfig):**

```bash

{

"metrics": {

"append\_dimensions": {

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

},

"metrics\_collected": {

"mem": {

"measurement": [

"mem\_used\_percent"

],

"metrics\_collection\_interval": 60

},

"disk": {

"measurement": [

"disk\_used\_percent"

],

"metrics\_collection\_interval": 60

}

}

}

}

```

Step 3: Create an EC2 Instance, Attach the role created in Step 1 and Add the script in userdata for agent.

While creating the instance we can attach the role.

A screenshot of a computer

Description automatically generated

We can add role into existing server as well….

Add userdata to installing the agent

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Description automatically generated

#!/bin/bash

wget https://s3.amazonaws.com/amazoncloudwatch-agent/linux/amd64/latest/AmazonCloudWatchAgent.zip

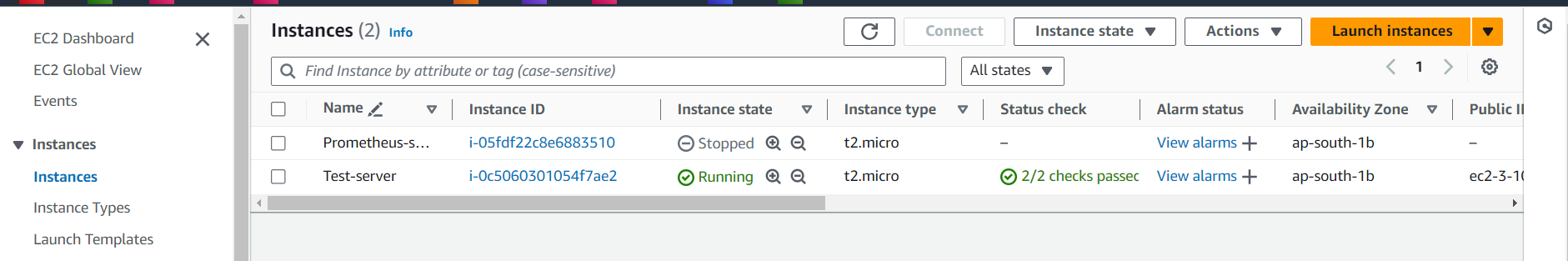
sudo apt install unzip -y

unzip AmazonCloudWatchAgent.zip

sudo ./install.sh

sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-ctl -a fetch-config -m ec2 -c ssm:/alarm/AWS-CWAgentLinConfig -s

Server into the running state...



Step4: Check if EC2 Instance has CWAgent Installed or not to running below commands

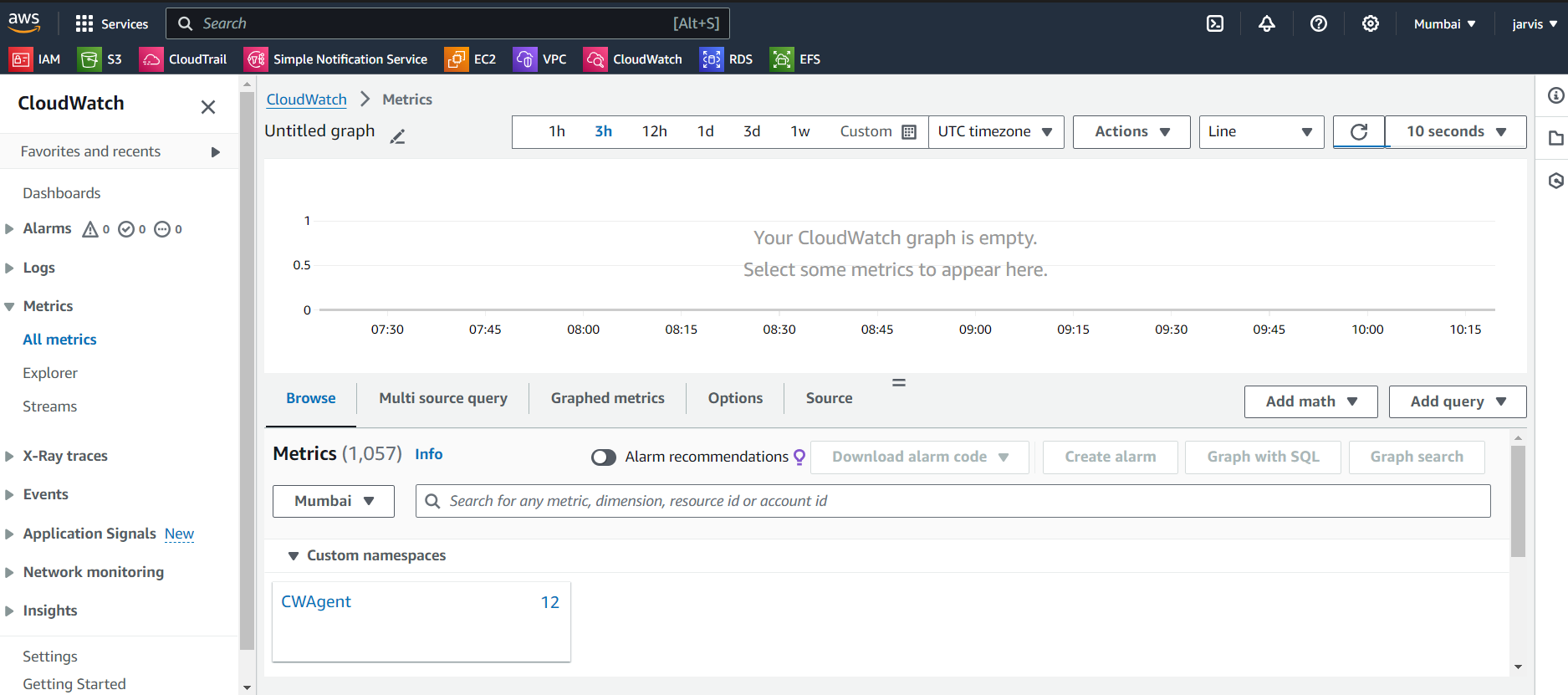
# sudo /opt/aws/amazon-cloudwatch-agent/bin/amazon-cloudwatch-agent-ctl -m ec2 -a status



Here we can se ec2 instance cloudwatch agent is up & running…

Step 4: Check memory & disk utilization is working or not in CloudWatch? It pushes the metrics from CloudWatch, instance-id will take metadata from instance.

Here we can see the custom metrics collected in CWAgent



In below screenshot we can see two section:

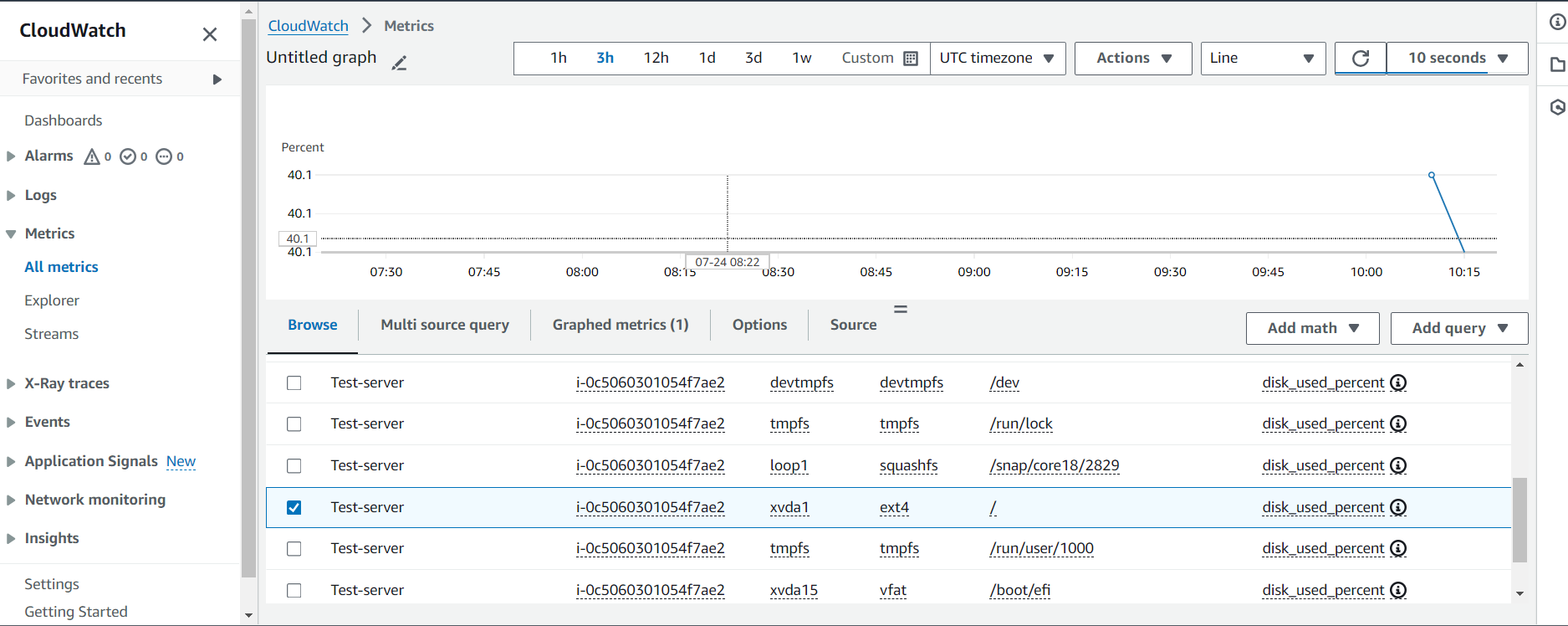
InstanceId, device, fstype, path = gives memory utilization percentage

InstanceId = gives cpu utilization percentage

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Description automatically generated

Disk Usage: /

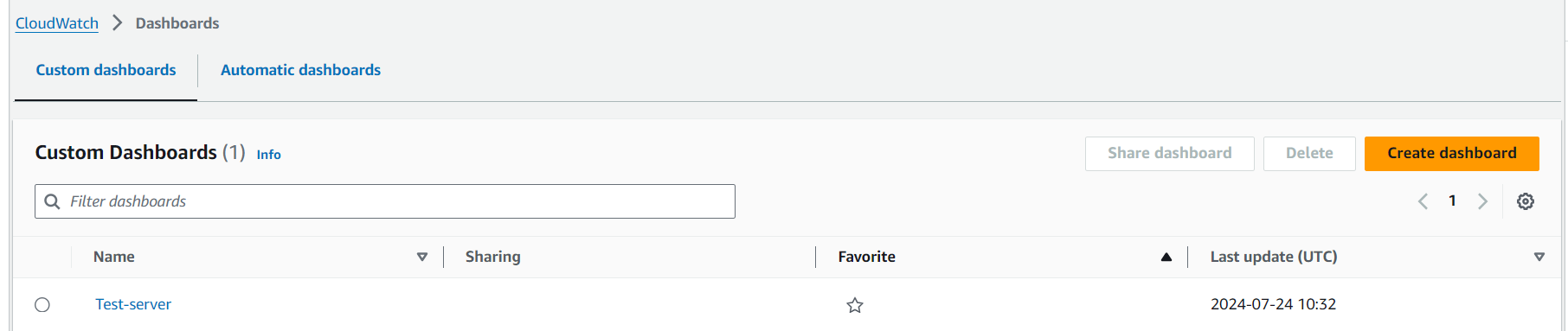


Memory Usage:

A screenshot of a computer

Description automatically generated

Step5: Create a Dashboard for ec2 which contains the (cpu, memory, disk)



Add Metrics:

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Description automatically generated

Select all three metrics: CPU – from default, memory & disk – from CWAgent

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Description automatically generated

Disk utilization metric: A screenshot of a computer

Description automatically generated

Memory utilization metric:

A screenshot of a computer

Description automatically generated

Final Dashboard for test-server:

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated