

Problem statement

Create an EC2 Instances with the following parameters,

Region: N. Virginia (us-east-1)

Name: Windows-VM-Server

Add additional tags: Instances, Volumes, Network Interfaces

AMI: Microsoft Windows Server 2019 Base

Architecture: 64-bit (x86)

Instance Type: t2.micro

VPC: Default VPC

Security Group: Create security group

Security group name: Windows-VM-Server

Inbound rule: Allow RDP, HTTP, and HTTPS

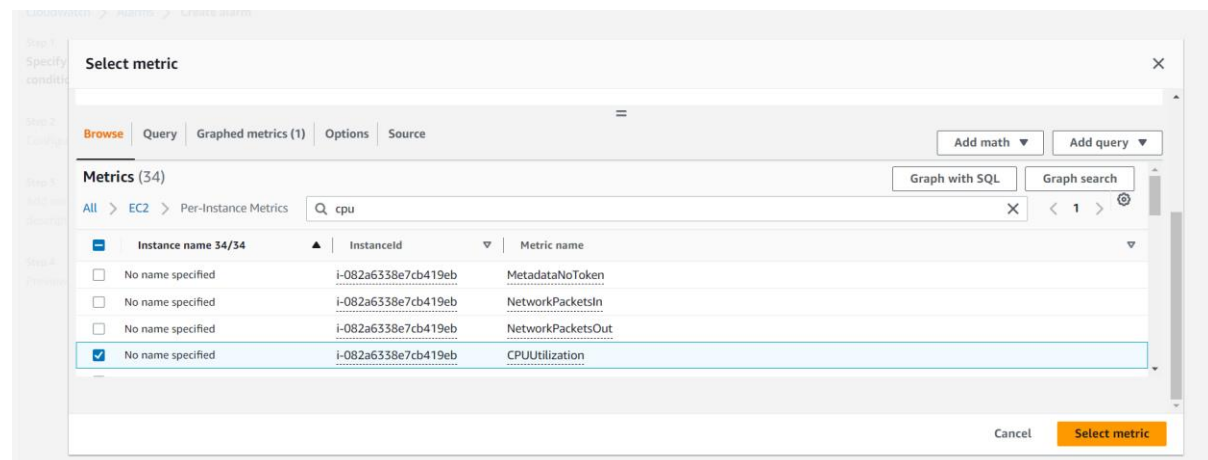
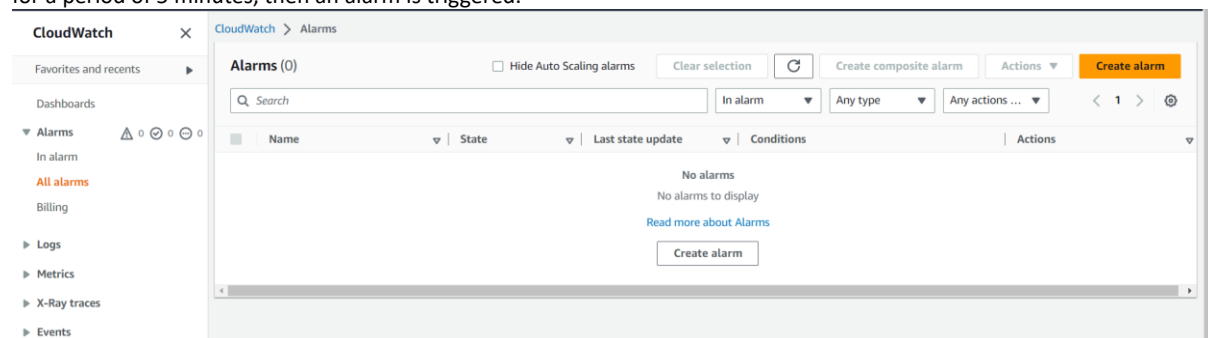
Source: 0.0.0.0/0

Disk Size: 30 GB

Volume Type: General Purpose SSD (gp2)

Number of instances: 1

Create a CloudWatch alarm when the CPU utilization of your EC2 instance that you have created above is greater than 90% for a period of 5 minutes, then an alarm is triggered.



AWS Console Home

Step 2

Configure actions

Step 3

Add name and description

Step 4

Preview and create

Metric

Edit

Graph

This alarm will trigger when the blue line goes above the red line for 1 datapoints within 5 minutes.

No unit

1

0.5

0

01:3002:3003:30

CPUUtilization

Namespace

AWS/EC2

Metric name

CPUUtilization

Instanceld

i-0328f6c94f8f93401

Instance name

newvm

Statistic

Q AverageX

Period

5 minutes

Conditions

Threshold type

☒ Static

Use a value as a threshold

☐ Anomaly detection

Use a band as a threshold

Whenever CPUUtilization is...

Define the alarm condition.

☒ Greater

> threshold

☐ Greater/Equal

>= threshold

☐ Lower/Equal

<= threshold

☐ Lower

< threshold

than...

Define the threshold value.

90

Must be a number

▼ Additional configuration

Datapoints to alarm

Define the number of datapoints within the evaluation period that must be breaching to cause the alarm to go to ALARM state.

1

out of

1

Notification

Alarm state trigger

Define the alarm state that will trigger this action.

Remove



In alarm

The metric or expression is outside of the defined threshold.



OK

The metric or expression is within the defined threshold.



Insufficient data

The alarm has just started or not enough data is available.

Send a notification to the following SNS topic

Define the SNS (Simple Notification Service) topic that will receive the notification.



Select an existing SNS topic



Create new topic



Use topic ARN to notify other accounts

Send a notification to...



Select an email list

Only email lists for this account are available.

Add notification

EC2 action

Alarm state trigger

Define the alarm state that will trigger this action.

Remove



In alarm

The metric or expression is outside of the defined threshold.



OK

The metric or expression is within the defined threshold.



Insufficient data

The alarm has just started or not enough data is available.

Take the following action...

Define what will happen to the EC2 instance with the Instance ID i-0328f6c94f8f93401 when this alarm is triggered.



Recover this instance

You can only recover certain EC2 instance types. [See documentation](#)



Stop this instance

You can only stop an instance if it is backed by an EBS volume. AWS will use the existing Service Linked Role (AWSServiceRoleForCloudWatchEvents) to perform this action. [Show IAM policy document](#)



Terminate this instance

You will not be able to terminate this instance if termination protection is enabled. AWS will use the existing Service Linked Role (AWSServiceRoleForCloudWatchEvents) to perform this action. [Show IAM policy document](#)



Reboot this instance

An instance reboot is equivalent to an operating system reboot. AWS will use the existing Service Linked Role (AWSServiceRoleForCloudWatchEvents) to perform this action. [Show IAM policy document](#)

Add EC2 action

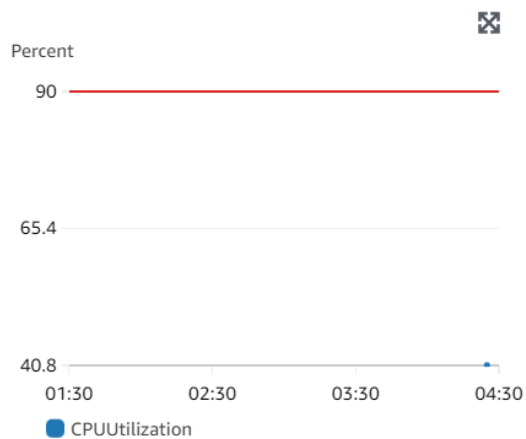
Step 1: Specify metric and conditions

[Edit](#)

Metric

Graph

This alarm will trigger when the blue line goes above the red line for 1 datapoints within 5 minutes.



Namespace

AWS/EC2

Metric name

CPUUtilization

InstanceId

i-0328f6c94f8f93401

Instance name

newvm

Statistic

Average

Period

5 minutes

Conditions

Threshold type

Static

Whenever **CPUUtilization** is

Greater (>)

than...

90

► **Additional configuration**

Step 2: Configure actions

Edit

Actions

EC2 action
When In alarm, stop this instance (Instance ID: i-0328f6c94f8f93401)

Step 3: Add name and description

Edit

Name and description

Name
alarm-1

Description
-

Cancel

Previous

Create alarm

Notes

Use the credentials given in the hands-on to log in to the AWS Portal.

Switch to new Console and Proceed.

Ensure that you are in the N. Virginia (us-east-1) region throughout the lab.

Connect to the VM from the local machine through the RDP connection.

After sign-in to the AWS Portal, it will take some time to enable the access policy to the account.

To create a CloudWatch alarm for an EC2 instance when the CPU utilization is greater than 90% for a period of 5 minutes, follow these steps:

Open the CloudWatch console in your AWS account.

In the left navigation pane, select "Alarms" and then click the "Create alarm" button.

In the "Create Alarm" wizard, select "EC2 metrics" and then choose "Per-Instance Metrics" for the "Metric Namespace".

Choose "CPUUtilization" for the "Metric Name".

Choose the EC2 instance for which you want to create the alarm.

For the "Statistic", choose "Average".

For the "Period", choose "1 Minute".

For the "Threshold", enter "90".

Under the "Actions" section, click "New list" and choose "EC2 Actions".

Choose "Stop" or "Terminate" for the "Whenever this alarm" option, depending on what action you want to take when the alarm is triggered.

Enter a name and description for the alarm.

Click the "Create Alarm" button to create the alarm.

The alarm will be triggered when the CPU utilization of the selected EC2 instance is greater than 90% for a period of 5 minutes. You can choose to stop or terminate the instance as an action when the alarm is triggered.