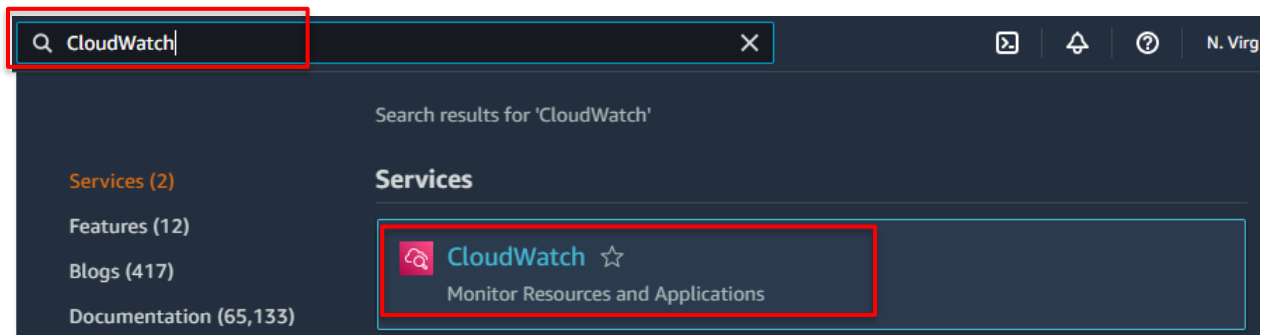


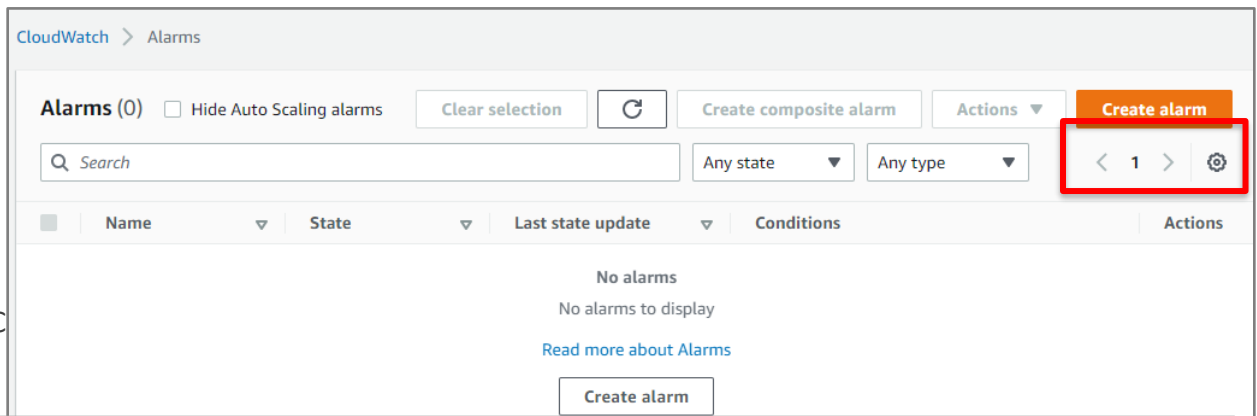
# CloudWatch Alarm

## Step 1: Create CloudWatch alarm to stop the instance

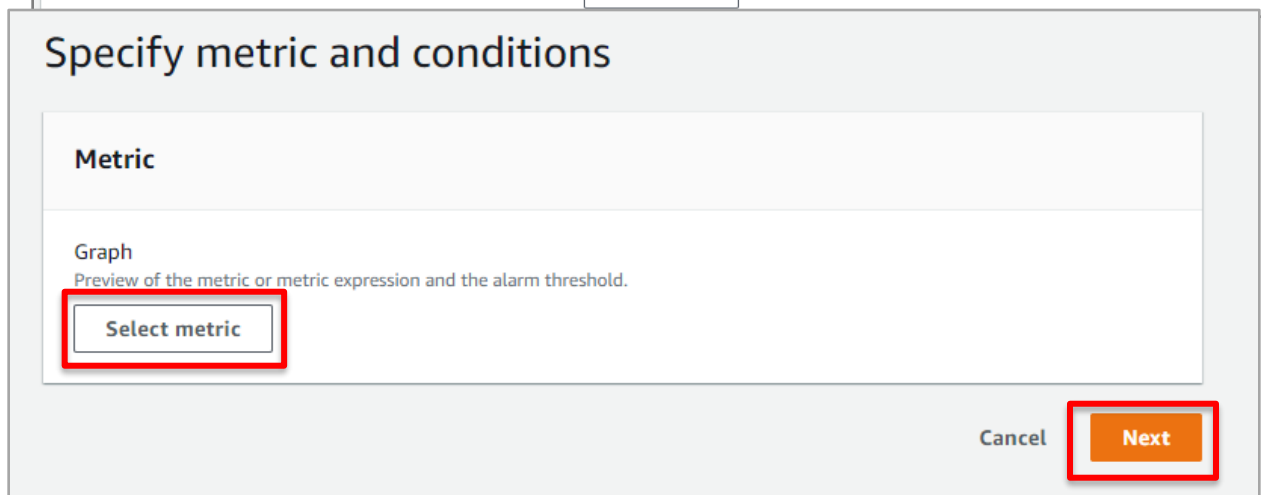
1.1 In the AWS management console, search for **CloudWatch** and then click on **CloudWatch**:



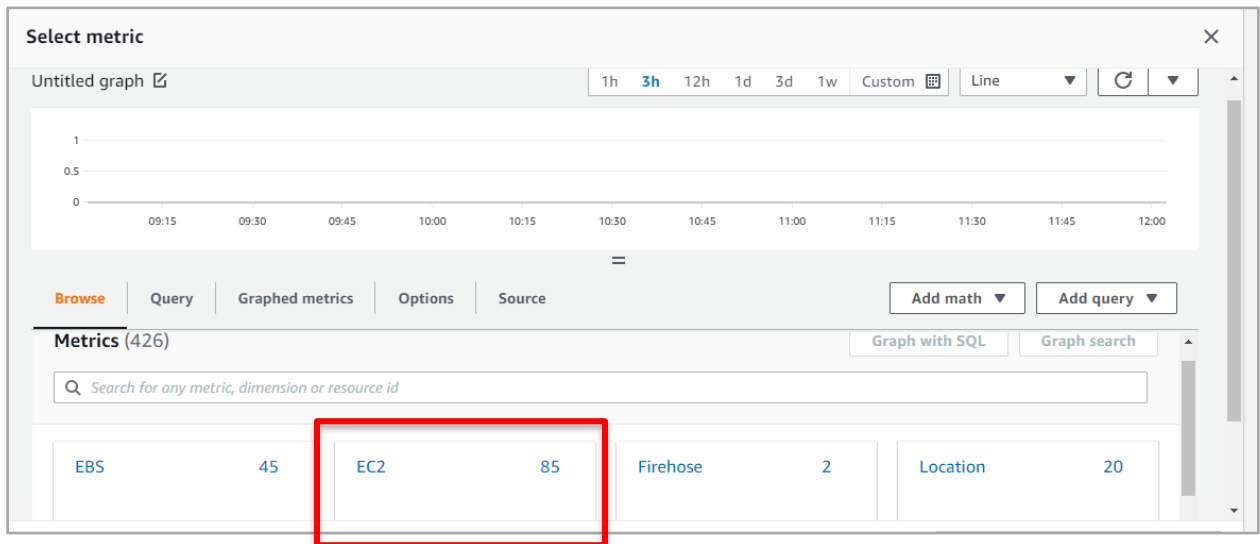
1.2 In the CloudWatch menu, click on **Create alarm**:



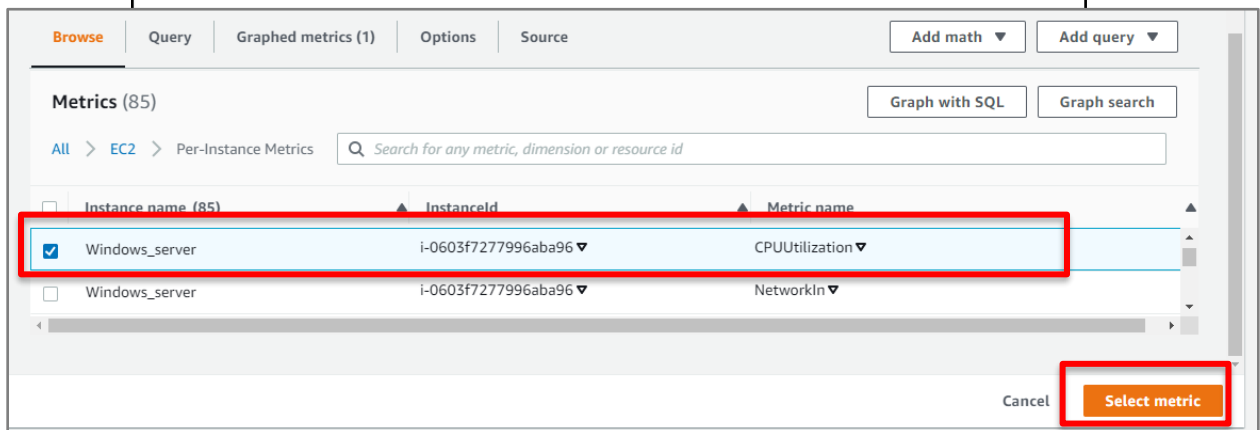
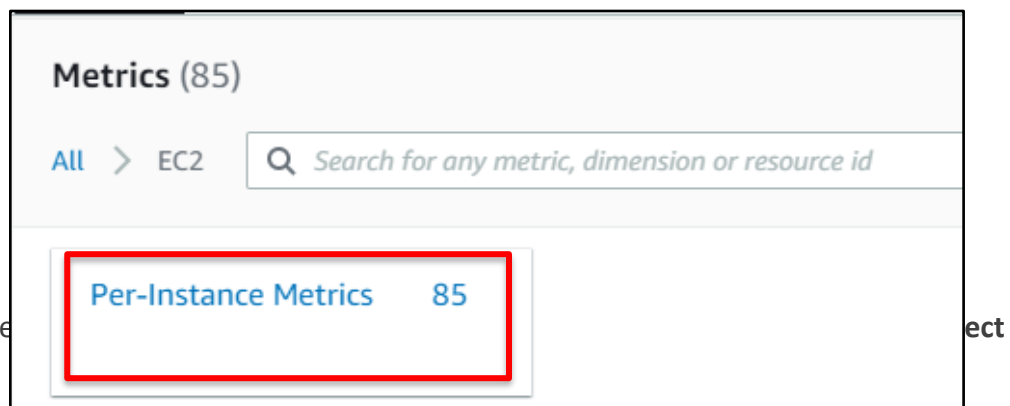
1.3 C



#### 1.4 Click on EC2 and then select **Per-Instance Metrics**:



#### 1.5 In the Metrics (85) view, select **Per-Instance Metrics**:



1.6 Select **Static** in the **Threshold type**, **Lower** in **CPUUtilization** and enter **30** in **threshold value** and then click on **Next**:

**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.

30

Must be a number

► **Additional configuration**

Cancel **Next**

1.7 In Alarm state trigger do the following:

- Select **In alarm** and select **Create new topic**
- Enter the **topic name** and **email id**, then click on **Create topic**

**Alarm state trigger**  
Define the alarm state that will trigger this action.

☒ **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

**Create a new topic...**  
The topic name must be unique.

instance\_notification

SNS topic names can contain only alphanumeric characters, hyphens (-) and underscores (\_).

**Email endpoints that will receive the notification...**  
Add a comma-separated list of email addresses. Each address will be added as a subscription to the topic above.

prakhar.gupta@simplylearn.net

user1@example.com, user2@example.com

**Create topic**

**Note:** Once the new topic is created, **Select an existing SNS** topic will be automatically selected.

### Notification

**Alarm state trigger**  
Define the alarm state that will trigger this action.

☒ **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...**

Only email lists for this account are available.

1.8 In the **EC2 action**, select **Stop this instance**:

### EC2 action

**Alarm state trigger**  
Define the alarm state that will trigger this action.

☒ **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-0fb43d5f5bba96b1d when this alarm is triggered.

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

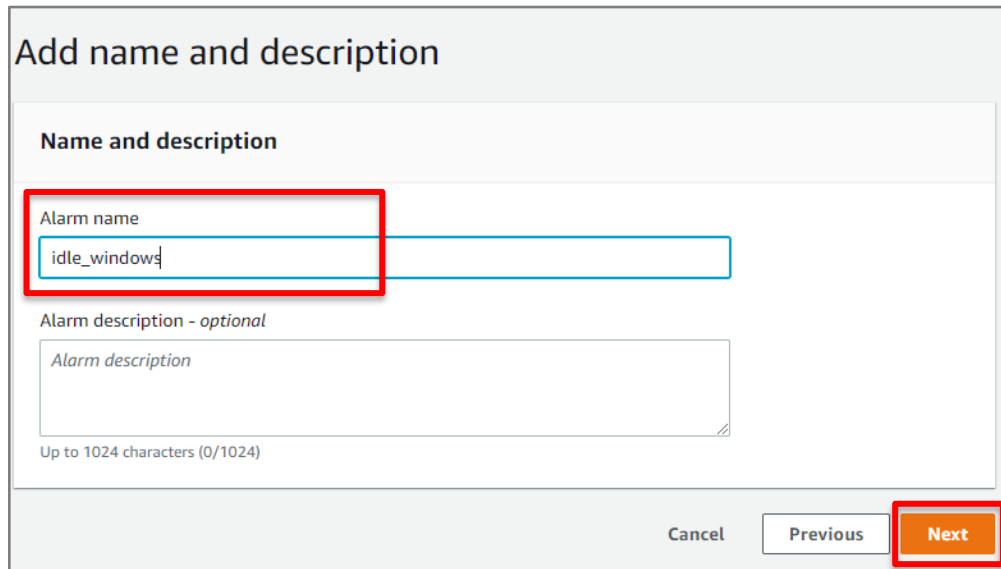
☒ **Stop this instance**  
You can only stop an instance if it is backed by an EBS volume. AWS will use the existing Service Linked Role (AWSServiceRoleForCloudWatchEvents) to perform this action. [Show IAM policy document](#)

☐ 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](#)

 **Failed to check if the instance is recoverable**

1.9 In **Add name and description**, write any name for your alarm, then click on **Next**:



**Add name and description**

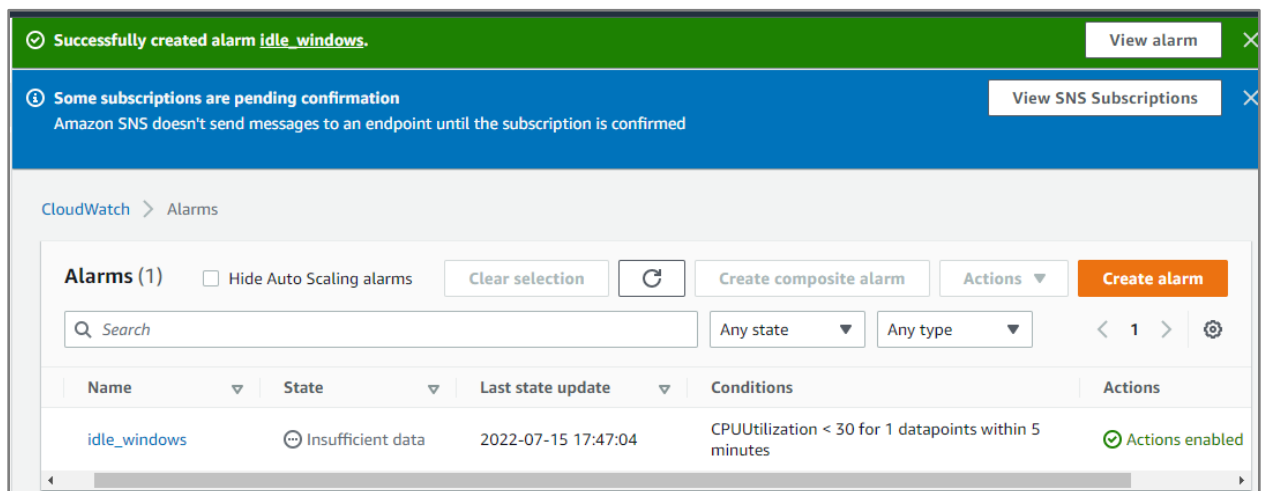
**Name and description**

Alarm name  
idle\_windows

Alarm description - optional  
Alarm description  
Up to 1024 characters (0/1024)

Cancel Previous **Next**

1.10 Once the alarm is created, it will appear on the **Alarms** dashboard:



CloudWatch > Alarms

**Alarms (1)** ☐ Hide Auto Scaling alarms [Clear selection](#) [Refresh](#) [Create composite alarm](#) [Actions](#) [Create alarm](#)

Any state Any type < 1 > [Settings](#)

Name	State	Last state update	Conditions	Actions
idle_windows	Insufficient data	2022-07-15 17:47:04	CPUUtilization < 30 for 1 datapoints within 5 minutes	Actions enabled

1.11 Now go to the EC2 dashboard and then check the **Instance state** and **Alarm status**:

Instances (1) Info						Refresh	Connect	Instance state ▼	Actions ▼	Launch instances	
Search						< 1 > ⚙					
<input type="checkbox"/>	Name	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status					
<input type="checkbox"/>	Windows_server	i-0603f7277996aba96	Running	t2.micro	2/2 checks passed	1/1 has +					

1.12 Refresh your instance status in every 20 sec then after some time you will find that the alarm will be triggered, and instance will stop:

Instances (1) Info						Refresh	Connect	Instance state ▼	Actions ▼	Launch instances	
Search						< 1 > ⚙					
<input type="checkbox"/>	Name	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status					
<input type="checkbox"/>	Windows_server	i-0603f7277996aba96	Stopping	t2.micro	-	1/1 in al +					

Hence, the moment CPU utilization goes below 30%, the instance will be stopped.