Create an Alarm Using CloudWatch

Project agenda: To create an alarm using CloudWatch that will allow you to watch CloudWatch metrics (CPU Utilization) with a given threshold and receive notifications when the metrics fall outside the threshold levels that you configure.

Description: Launch 3 virtual machine instances (Linux). Perform tasks on these VMS of your choice. Set up a dashboard with metrics showing CPU Utilization of all 3 VMS.

Tools required: AWS account

Prerequisites: None

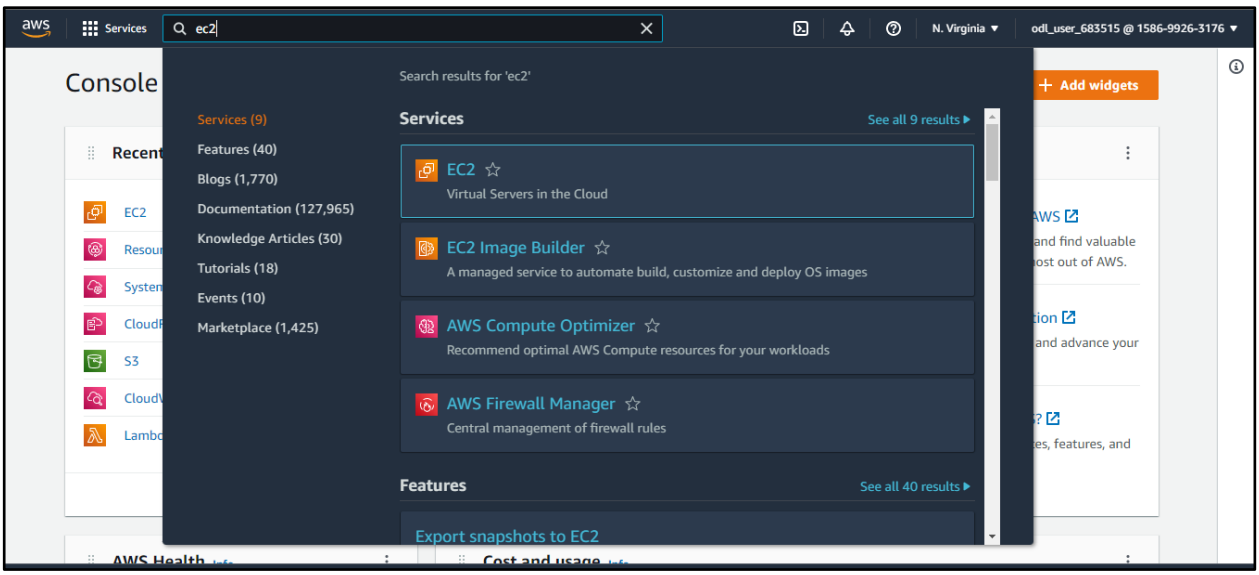
Expected deliverables: CloudWatch metrics

Steps to be followed:

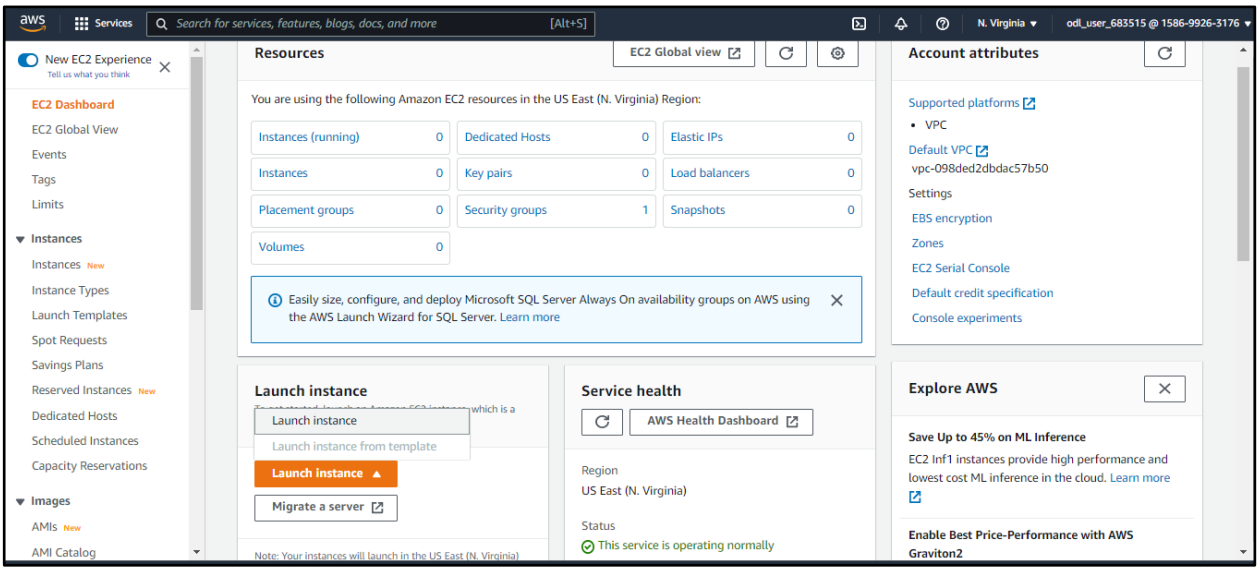
1. Launch 3 Linux VMs
2. Connect SSH into VMs
3. Perform Linux-related tasks on VM
4. Work with CloudWatch services
5. Select metrics for CPU utilization for all 3 VMs
6. Create an alarm and send a notification through SNS

Step 1: Launch 3 Linux VMs

1.1 In the Amazon console, search for **EC2** in the search bar:

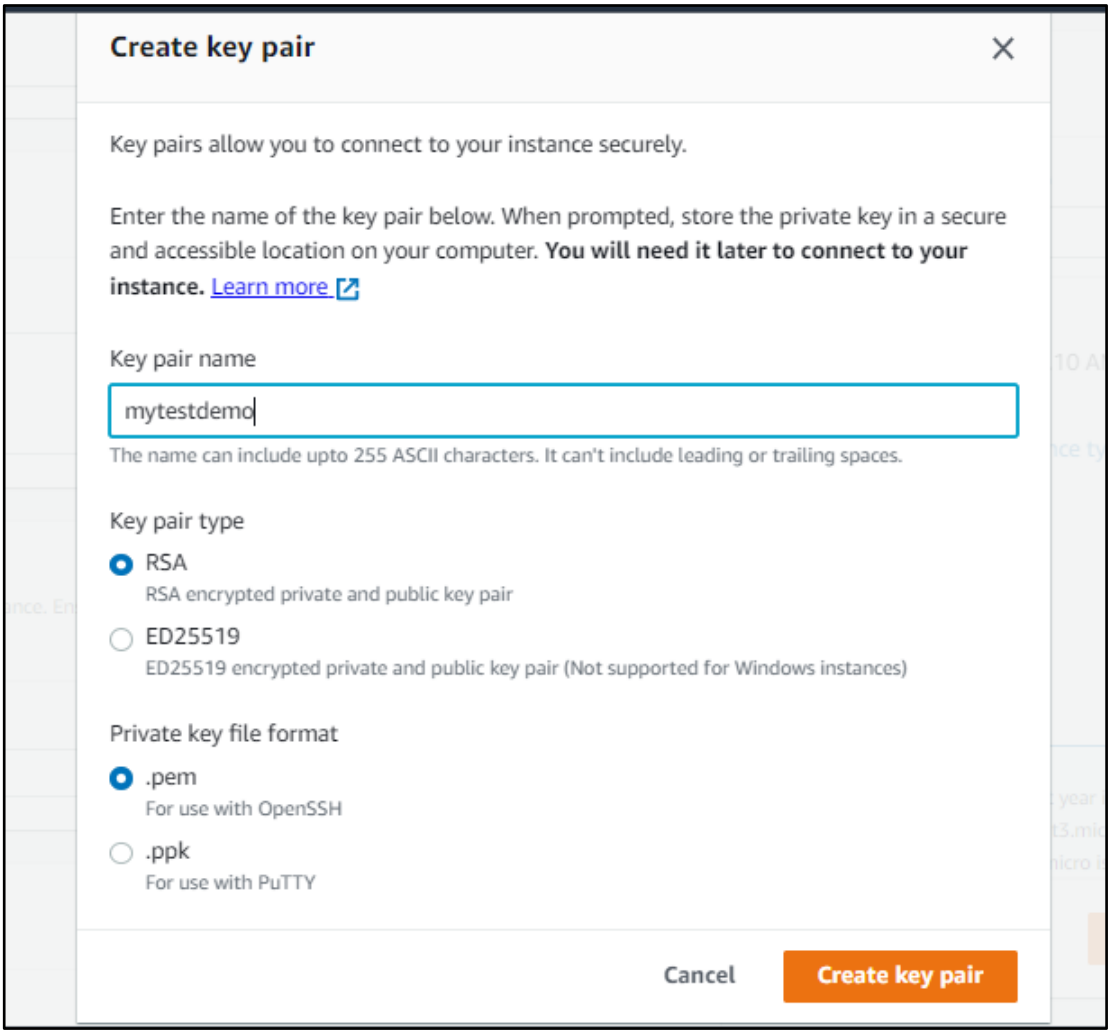


1.2 In the AWS EC2 console, select **Launch Instance:**



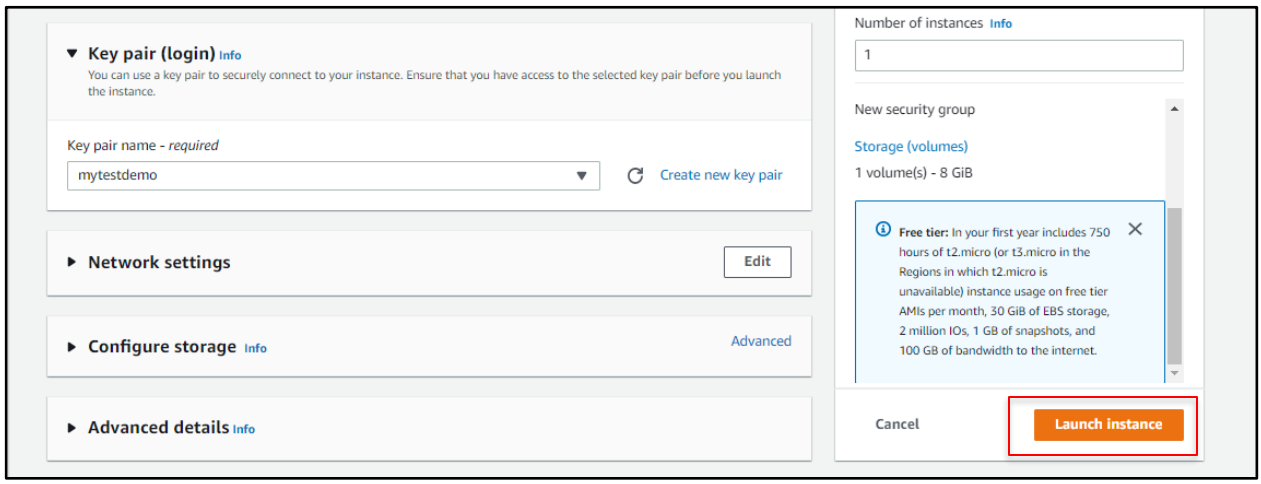
1.3 Add a name, select Amazon Linux Machine and t2.micro Instance type

1.4 Create a new keypair:

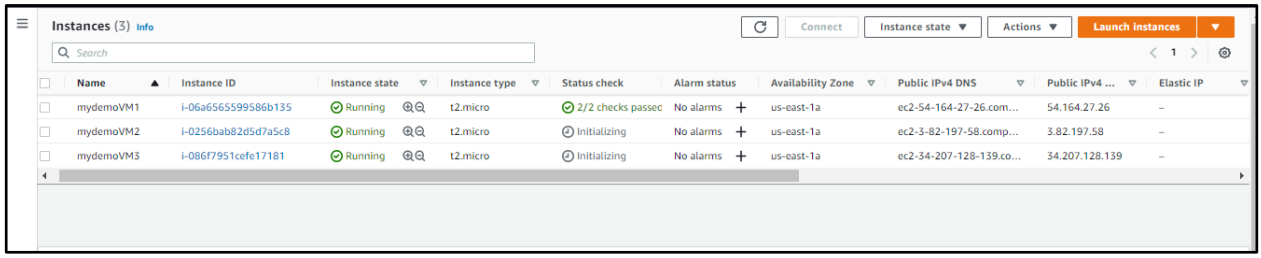


1.5 Click on the **Create key pair** button

1.6 Click on the **Launch Instance** button

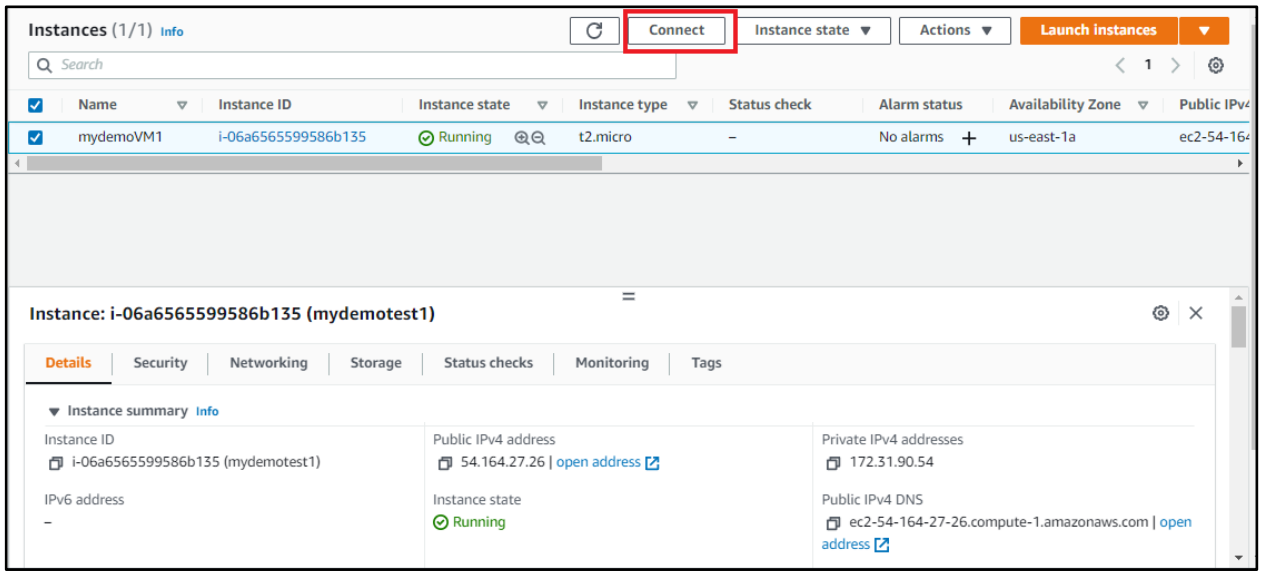


1.7 Create 2 more instances following the same steps:

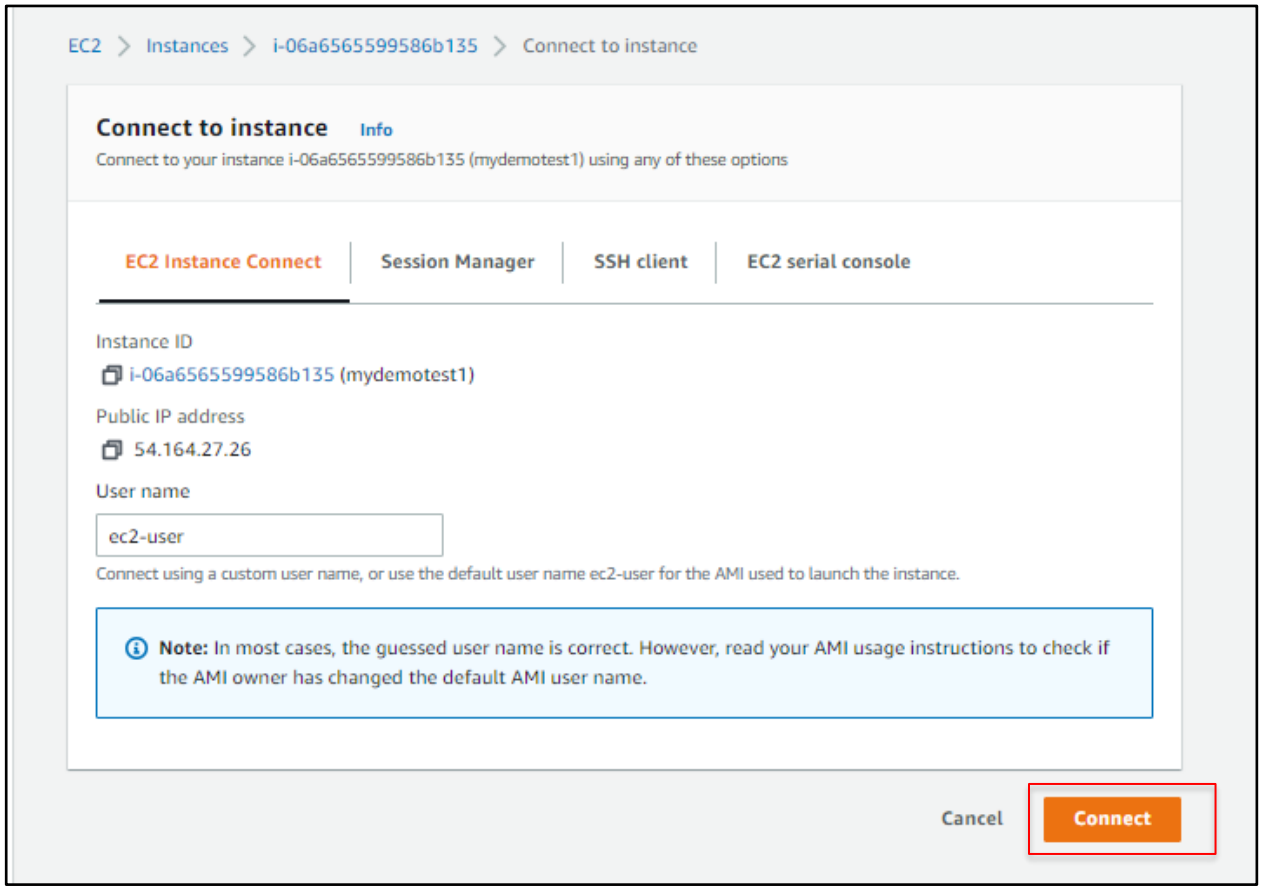


Step 2: Connect SSH into VMs

2.1 Select the Instance and click on the **Connect** option:

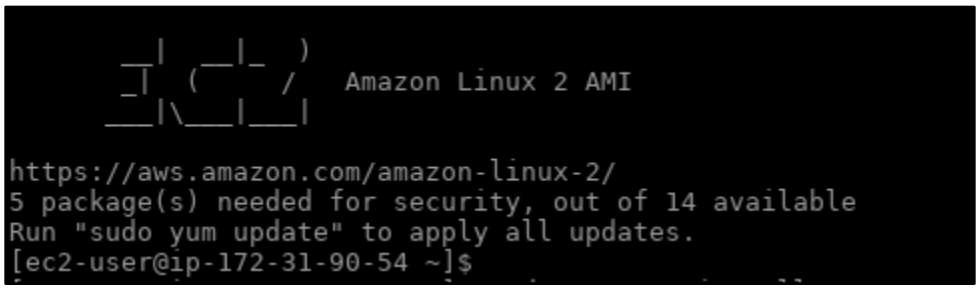


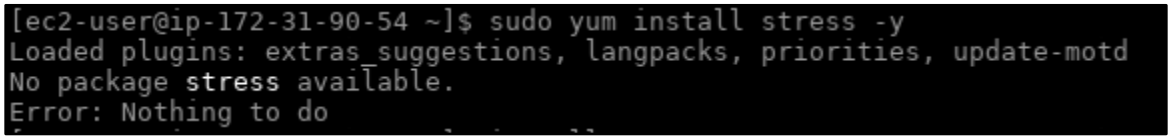
2.2 Click on the **Connect** button



Step 3: Perform Linux-related tasks on VM

3.1 For example: Run **sudo yum install stress -y:**

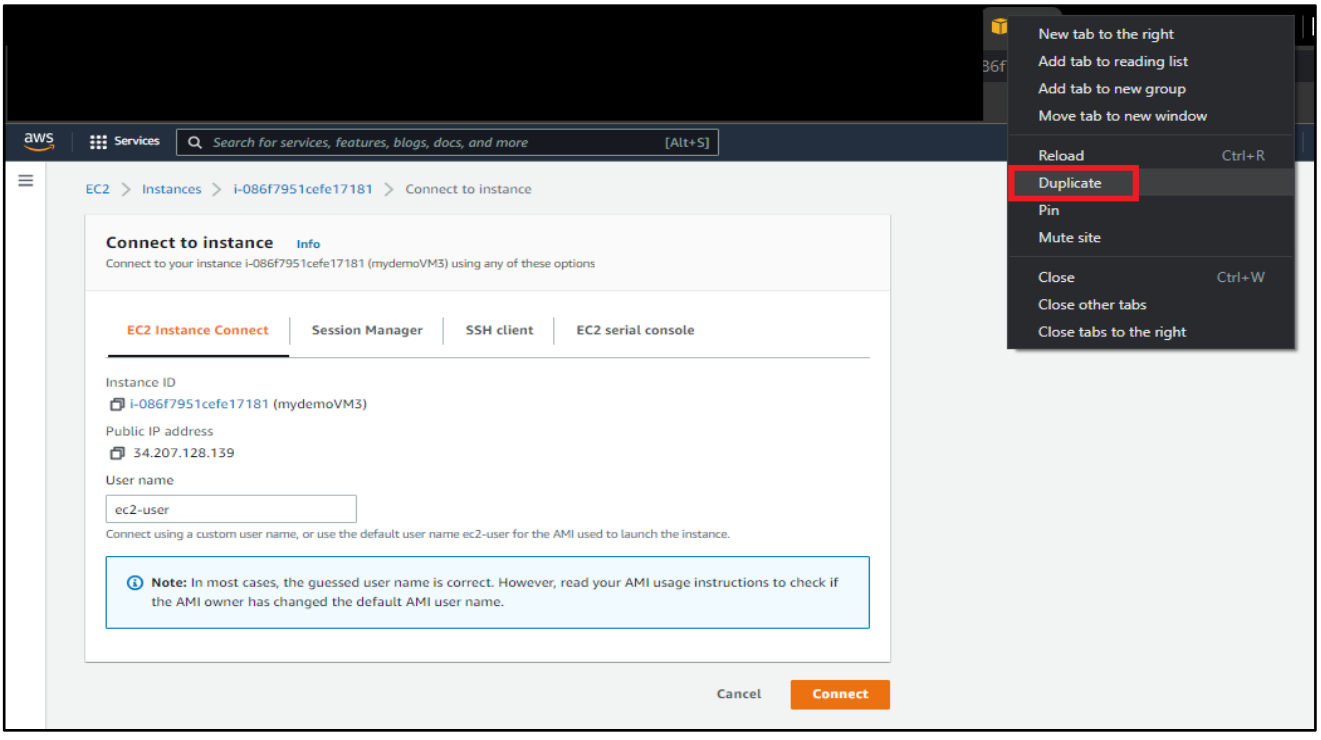




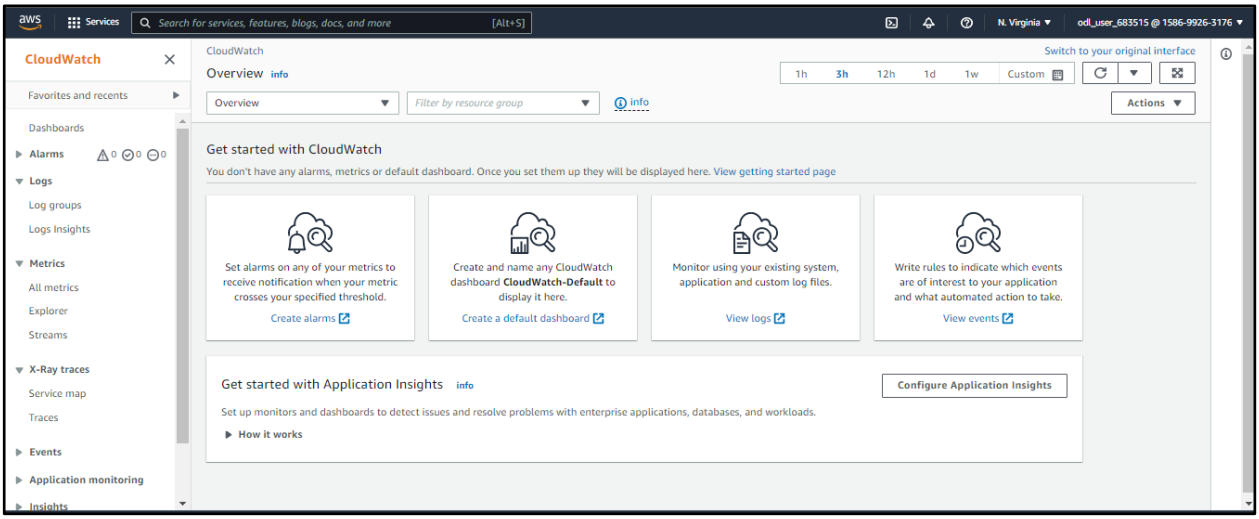
3.2 Connect all the 3 VMs

Step 4: Go to the CloudWatch service

4.1 Right-click on the tab and select the **Duplicate** option:

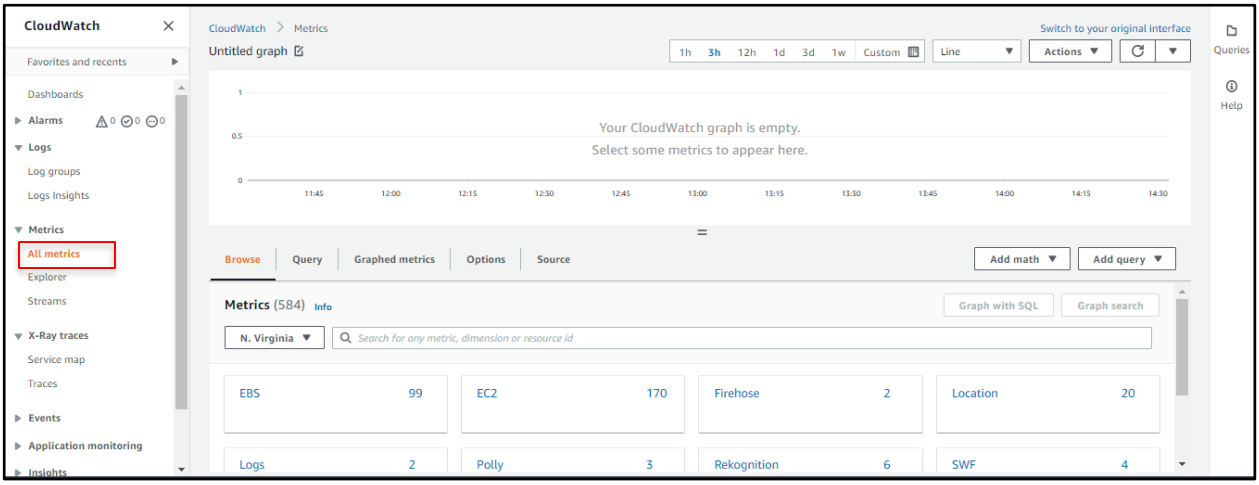


4.2 In the new tab, search **CloudWatch** in the search bar:

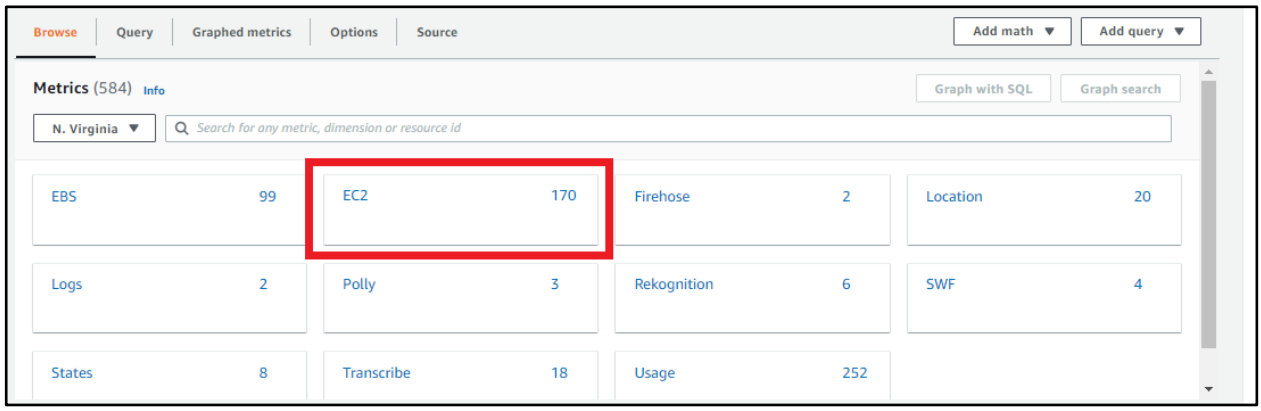


Step 5: Select metrics for CPU utilization for all 3 VMs

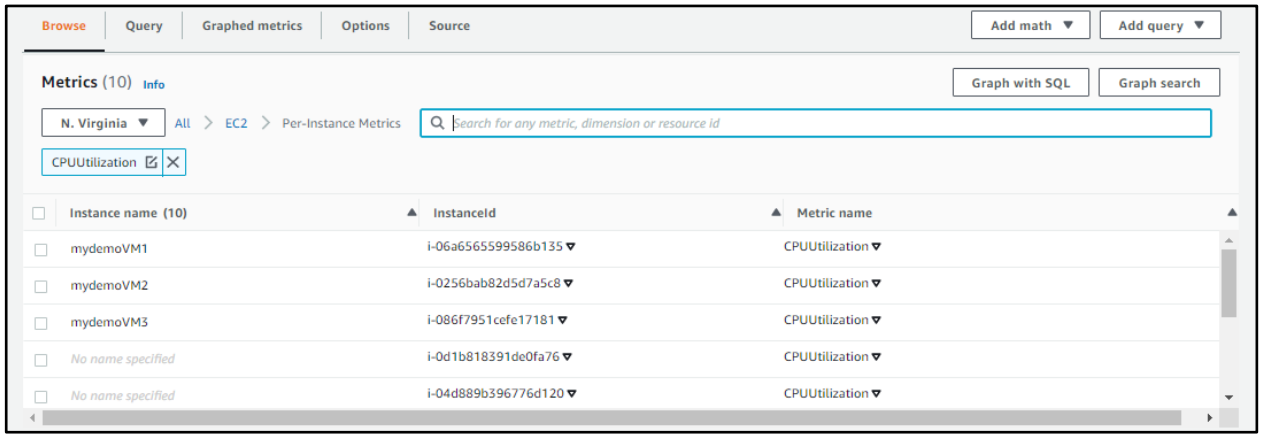
5.1 Click **Metrics** and select **All Metrics :**



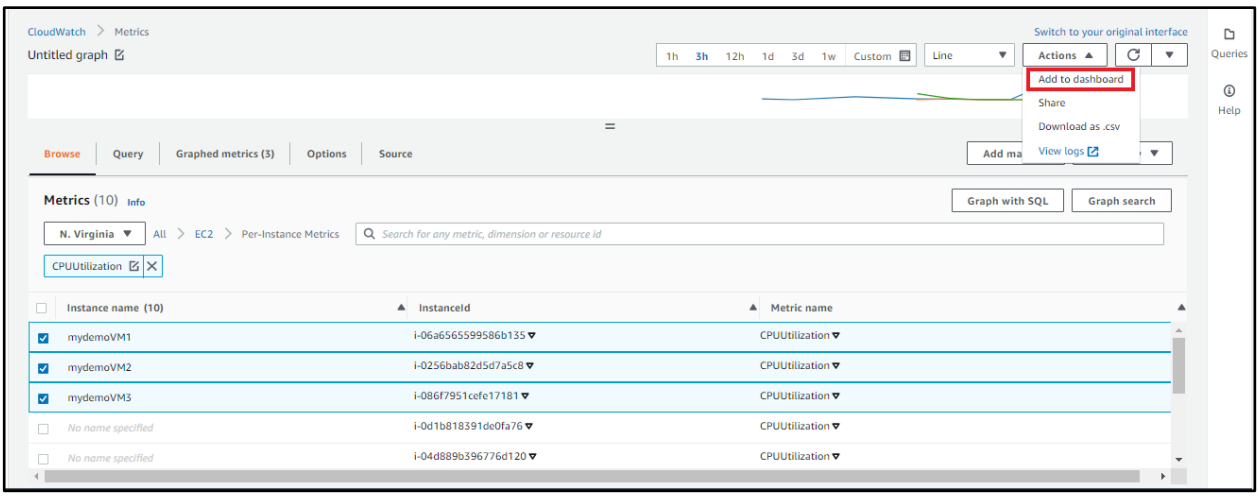
5.2 Select the **EC2** option



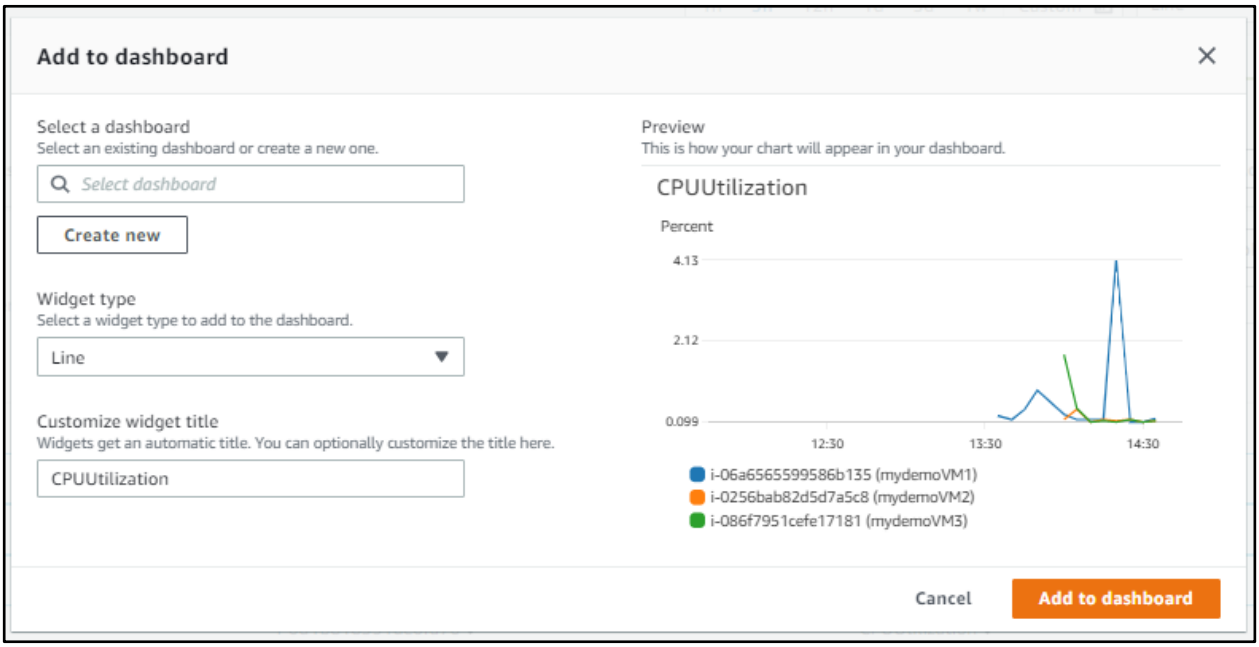
5.3 Select **Per-Instance Metrics** and search **CPUUtilization** in the search bar:



5.4 Select all the VMs, and click on **Actions** options, and select **Add to dashboard:**

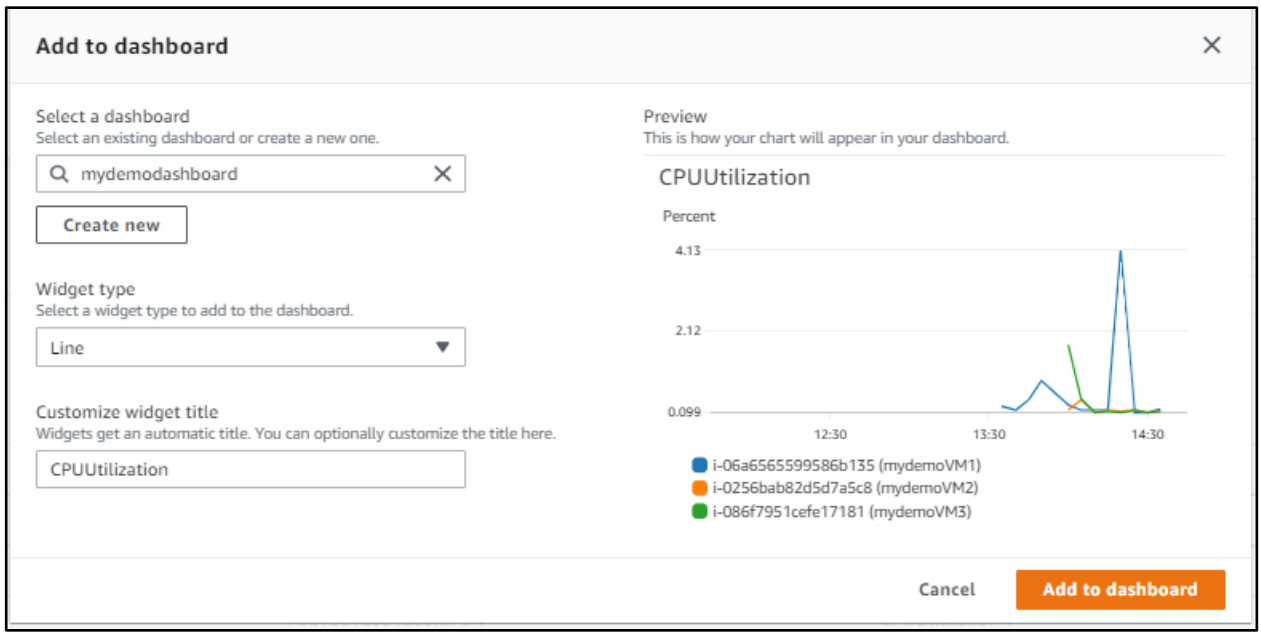


5.5 Select **Create new:**

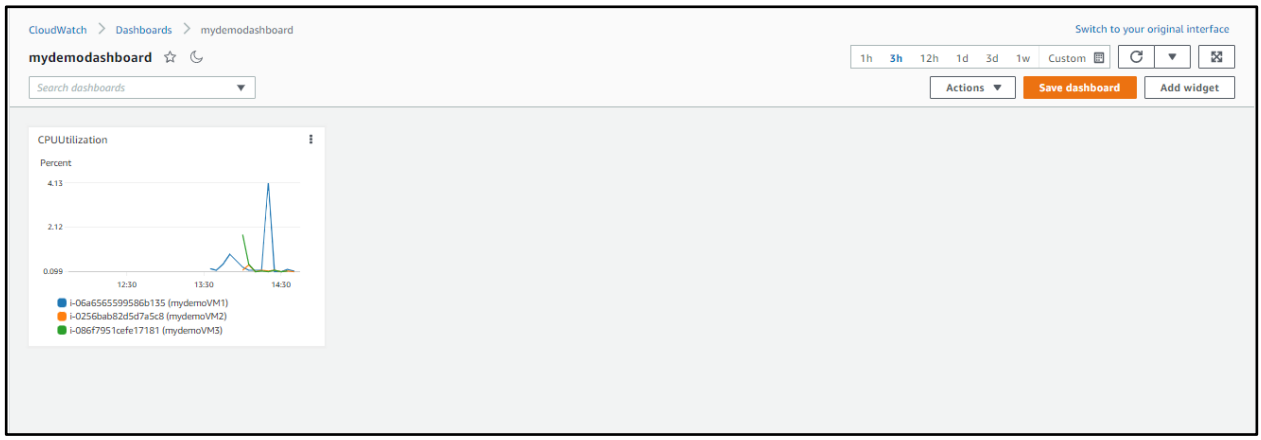


5.6 Give a name for the dashboard and click on **Create**

5.7 Click on **Add to dashboard** button



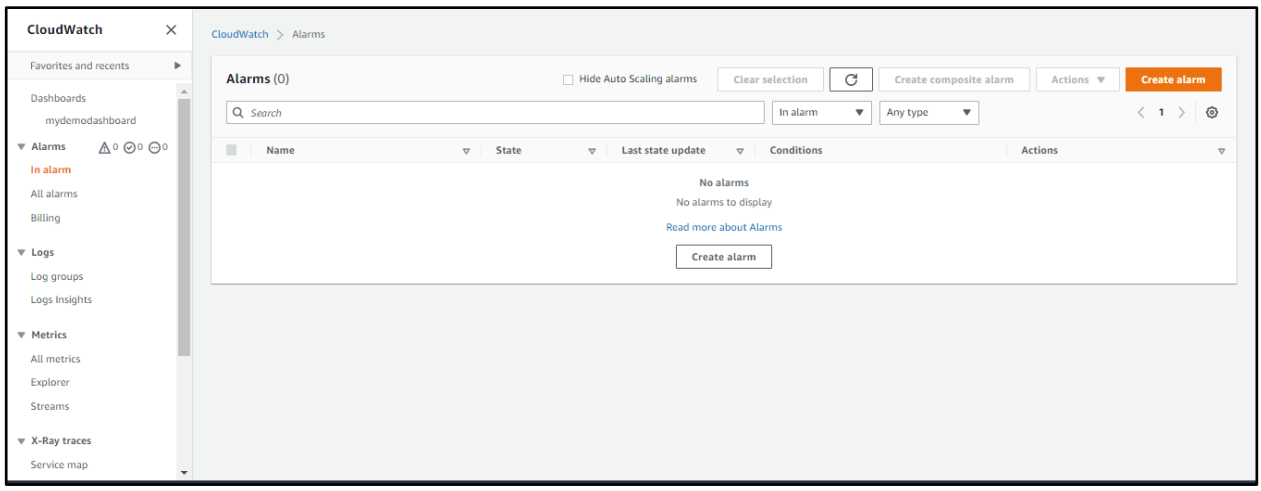
5.8 Click on the **Save dashboard** button:



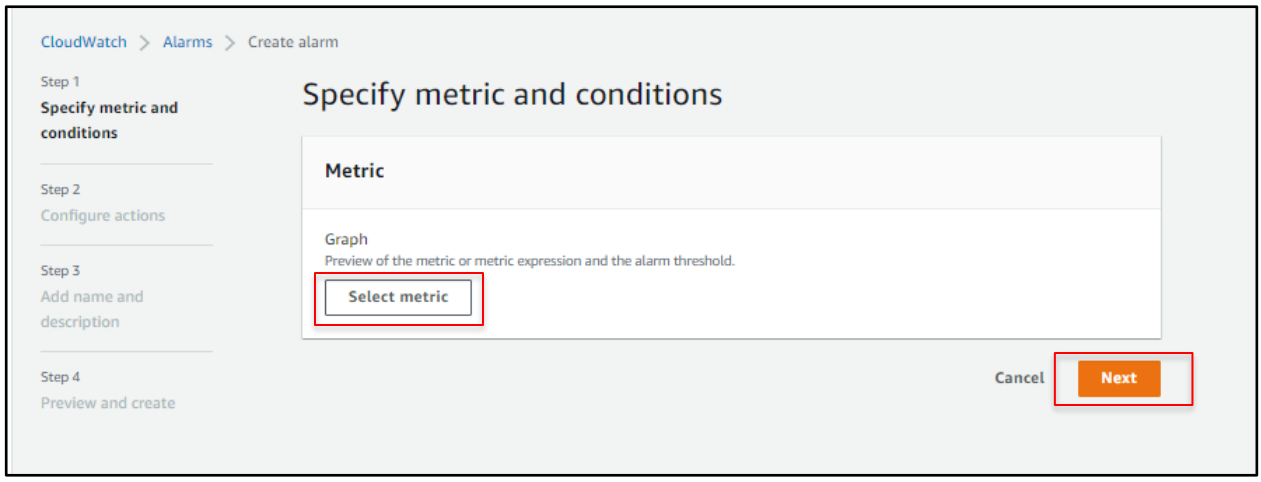
Step 6: Create an alarm

6.1 Click **Alarms** and select **In alarm**

6.2 Click **Create alarm:**

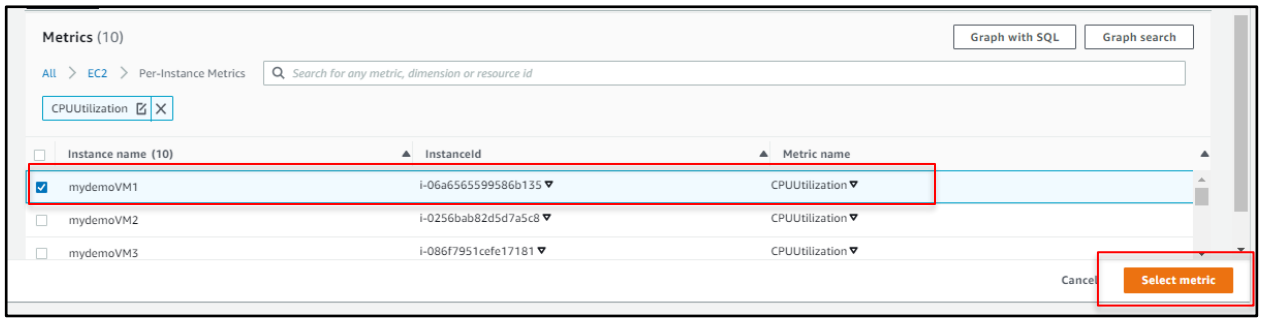


6.3 Click on **Select metric** then click on **Next:**

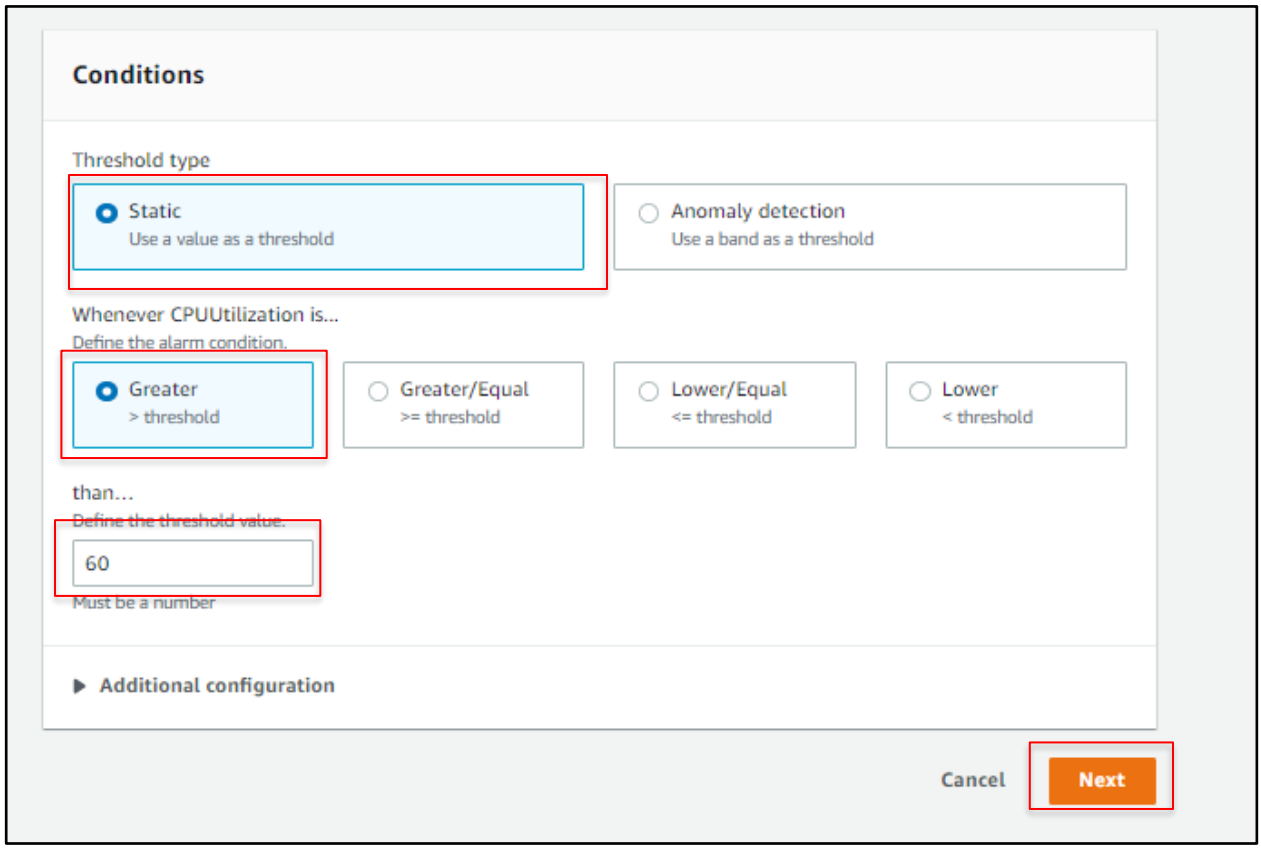


6.4 Click on **EC2**, select **Per-Instance Metrics**, and search **CPUUtilization** in the search bar

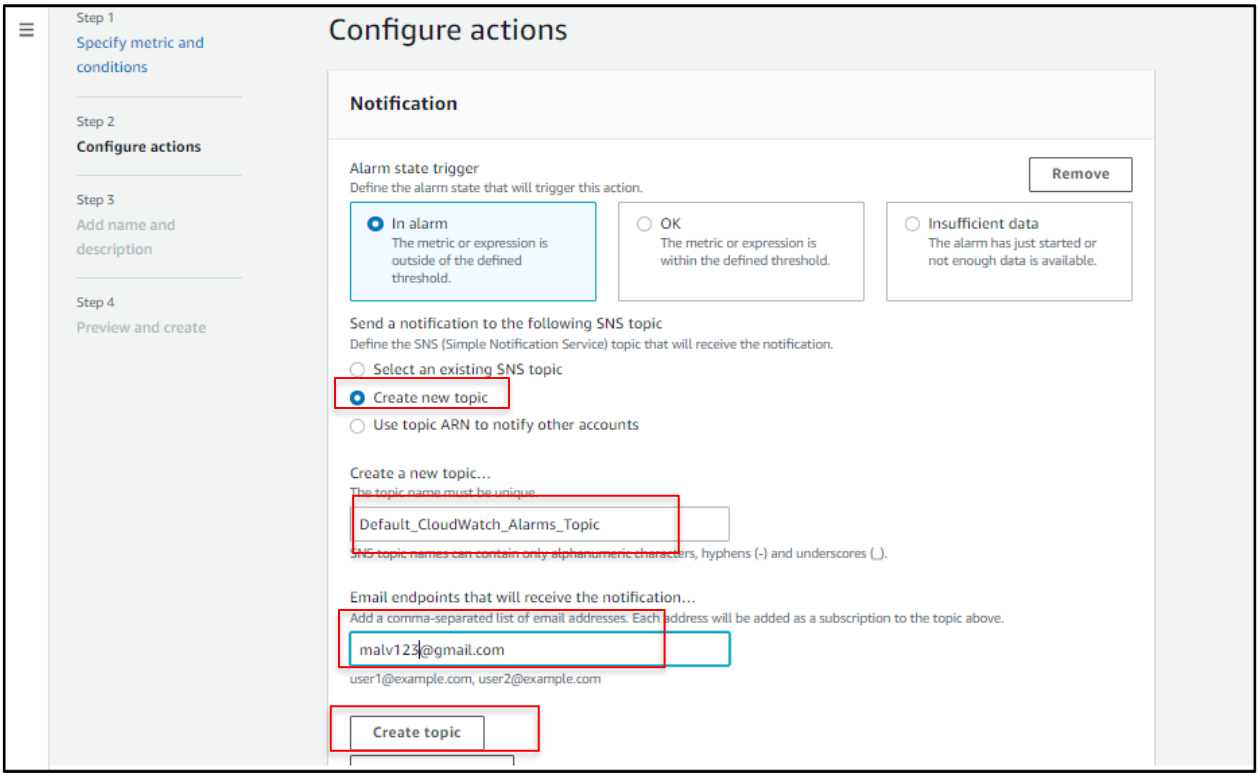
6.5 Select one metric at a time and click on **Select Metric** button:



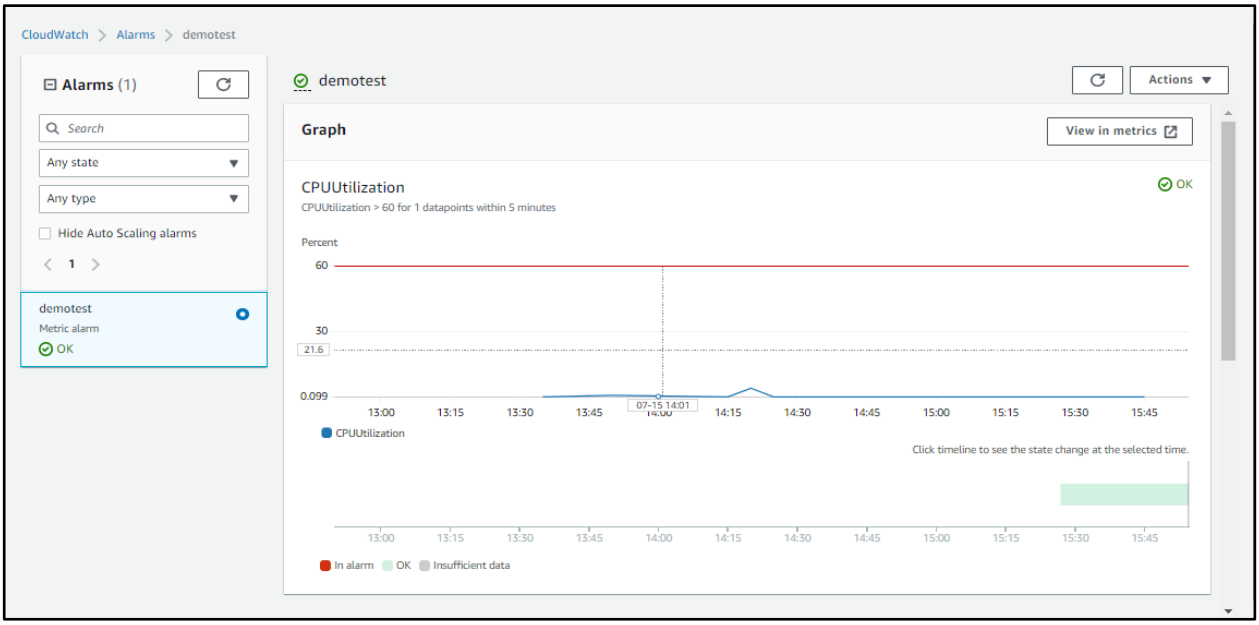
6.6 Give threshold value as 60 and click on **Next:**



6.7 Click on **Create new topic** and add an email address then click on **Create topic:**



6.9 Add a **Name** for alarm and click on **Create alarm**



The expected result is obtained.