Guided Lab: Creating your first CloudWatch Dashboard

Description

Amazon CloudWatch is a monitoring and management service provided by Amazon Web Services (AWS) for applications and infrastructure resources running on the AWS platform. The CloudWatch service collects and tracks metrics, collects and monitors log files, and sets alarms. The CloudWatch Dashboard is a feature within CloudWatch that allows users to create customized dashboards to visualize and monitor their AWS resources and applications.

Key features and functions of CloudWatch Dashboard include:

1. **Customization:** You can create dashboards that are tailored to their specific needs by adding and arranging widgets. Widgets can display various types of data, including graphs, numbers, text, and more.
2. **Visualization:** Dashboards provide a visual representation of the performance and health of your AWS resources. This visual representation can help users quickly identify trends, patterns, and potential issues.
3. **Real-time Monitoring:** The dashboard provides real-time monitoring capabilities, allowing users to see the current state of their resources and applications.
4. **Alarm Integration:** Users can integrate CloudWatch Alarms into their dashboards. Alarms can be set to notify users when certain thresholds are breached, allowing for proactive responses to potential issues.

Prerequisites

This lab assumes you have experience creating EC2 instances and are familiar with its basic components.

If you find any gaps in your knowledge, consider taking the following labs:

- Creating an Amazon EC2 instance (Linux)
- Setting up a Web server on an EC2 instance
- Installing and configuring CloudWatch Agent

Objectives

In this lab, you will:

- Learn how to create your CloudWatch Dashboard

Subscribe to access AWS
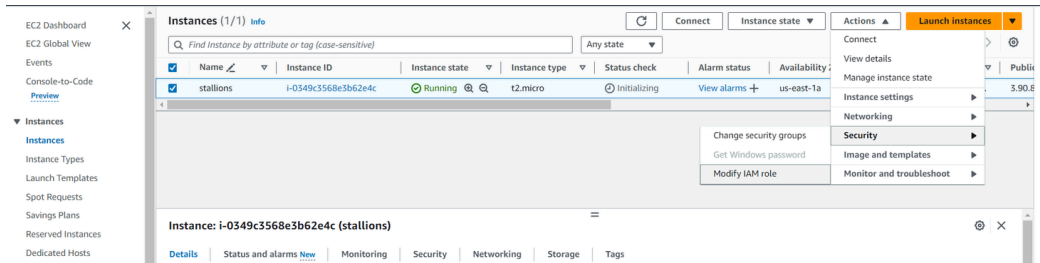
PlayCloud Labs

## Lab Steps

Creating an EC2 instance

1. Create an EC2 instance using the following configurations:

- **Name**: stallions
- **Instance type**: t2.micro
- **AMI**: Ubuntu
- **Key pair**: Proceed without a Key Pair.

2. Once, the instance is created and running, attach an IAM role or IAM user to the server that will run the agent. Navigate to the EC2 console and select your instance. Click on **Actions** -> **Security** -> **Modify IAM role**.

3. Choose **PlayCloud-Sandbox**.
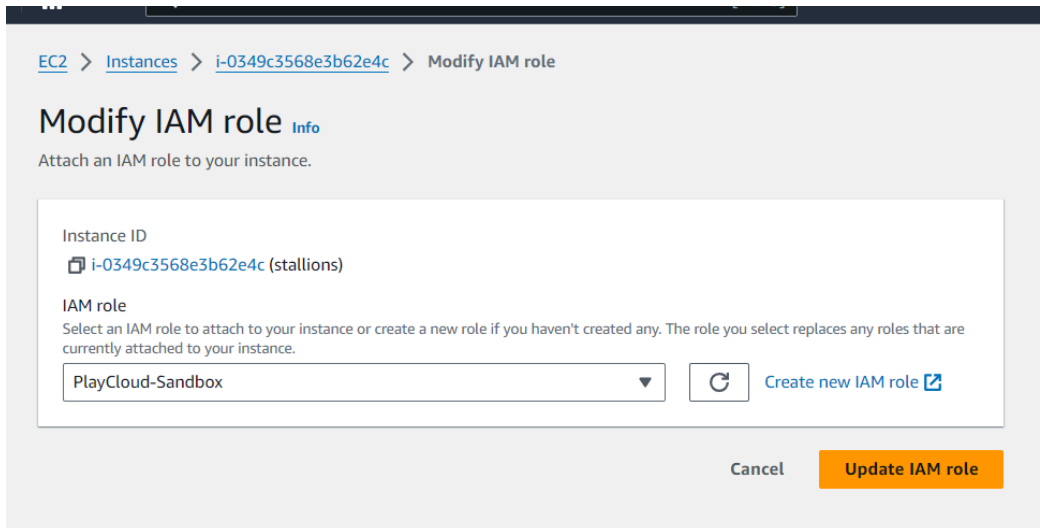
4. Click Update IAM role.
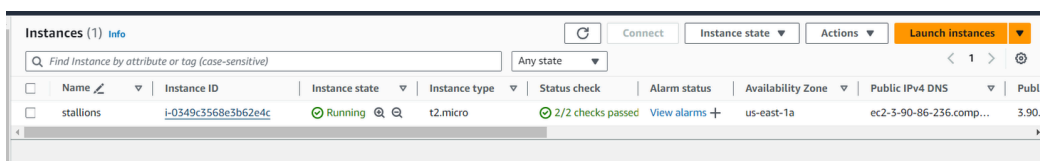
5. Take note of your EC2 Instance ID.

Creating CloudWatch Dashboard

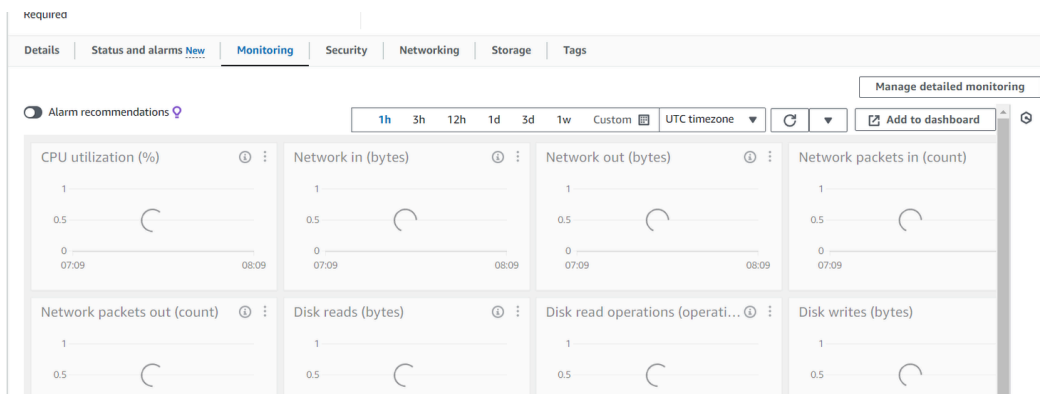There are two ways to create your **CloudWatch Dashboard:**

- Directly to your EC2 instance ;
- In CloudWatch

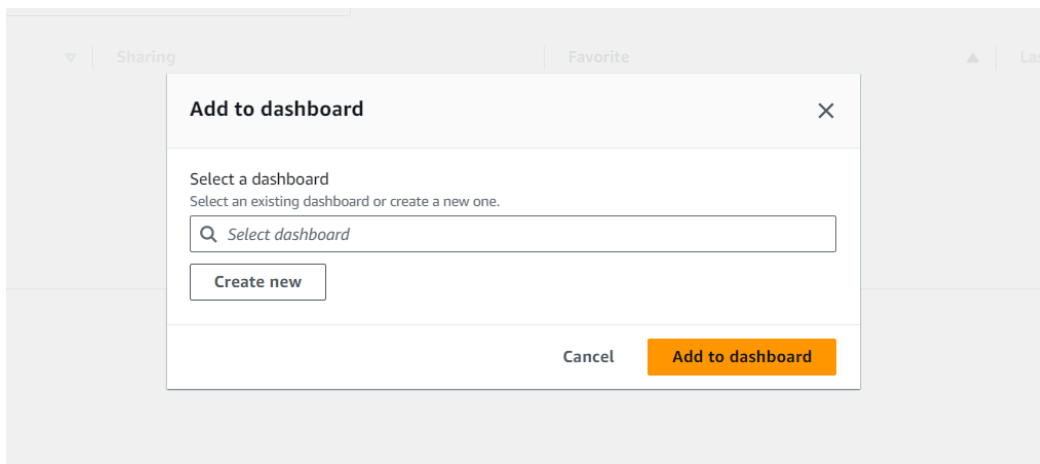## Creating CloudWatch Dashboard via EC2 instance

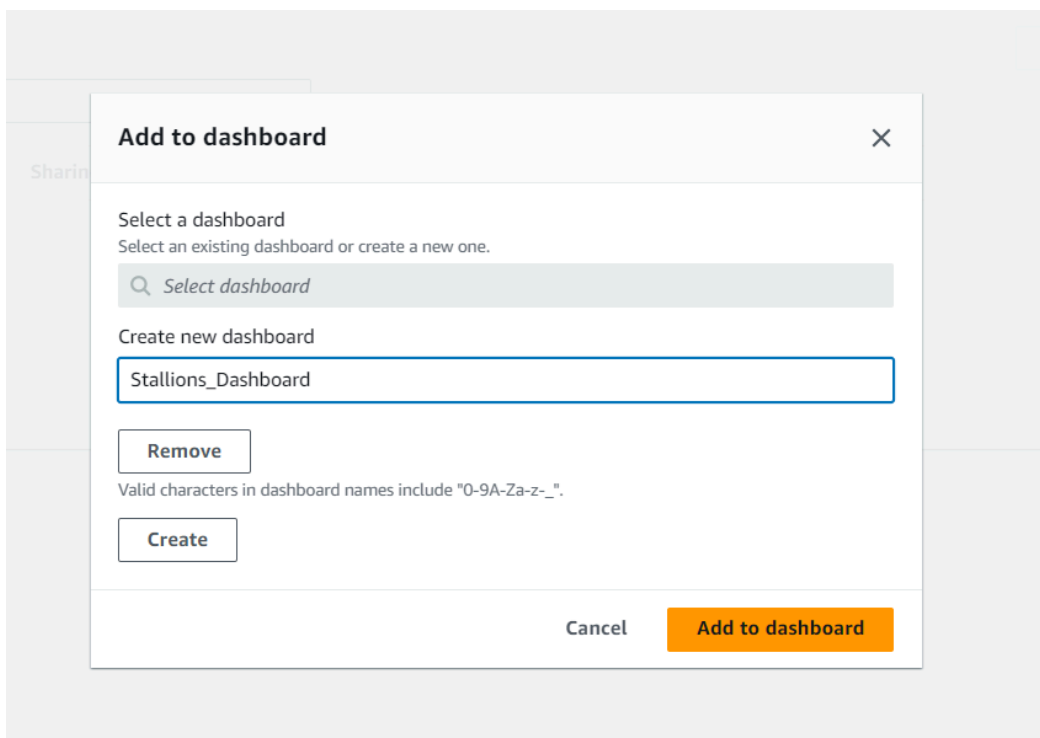1. Click the **instance ID** in your EC2.

2. Scroll down and select **Monitoring.**

3. Click the **Add to Dashboard** button and you will be redirected to CloudWatch. Click **Create New**.

4. To create your dashboard, enter the name of your dashboard and click on the **Create** button. After that, click on the **Add to Dashboard** button.
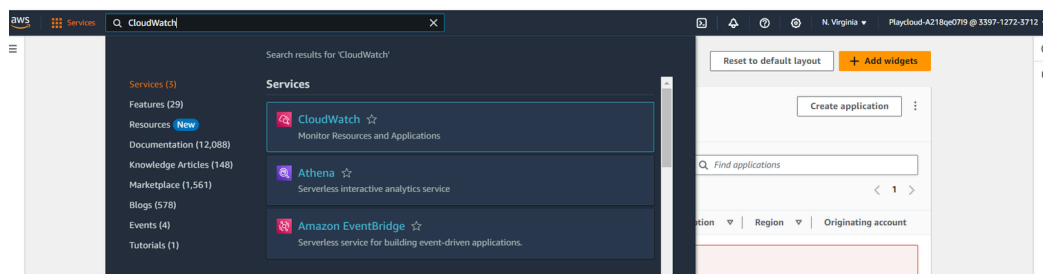

5. Various metrics that are important for monitoring your instance will be added. Please click on the **Save** button to confirm the changes.
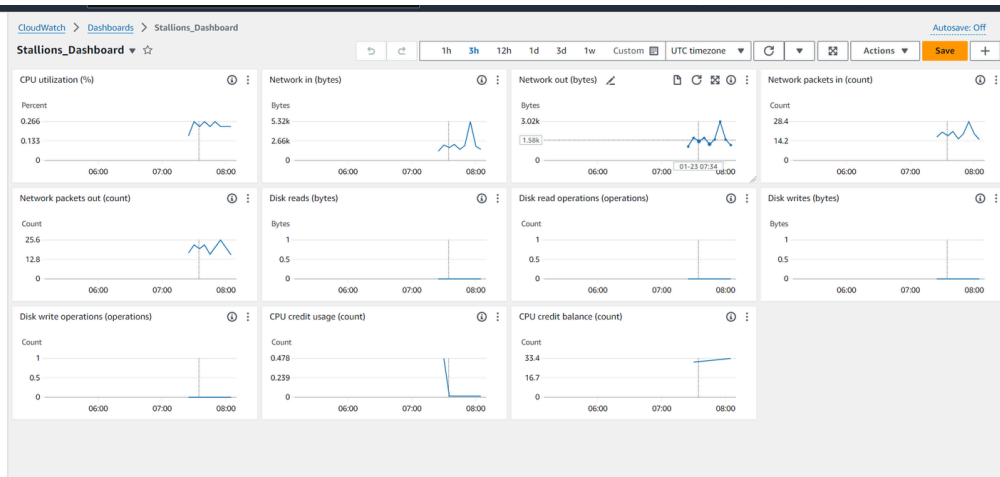
Creating CloudWatch Dashboard via Custom Dashboard
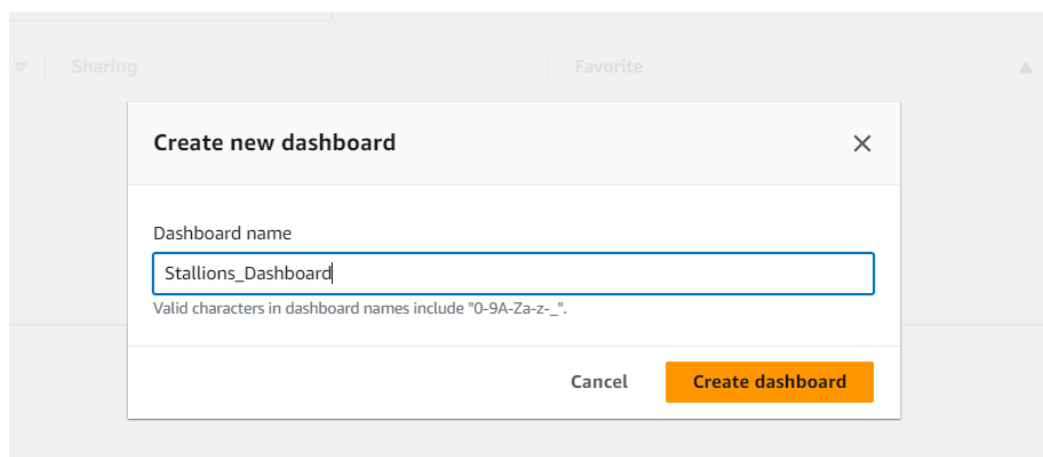
1. Search for **CloudWatch** using the search bar and select the **CloudWatch** result under Services on the AWS Management Console.

2. To create a new dashboard, first, go to the navigation pane. From there, select **Dashboards** and then click on **Create Dashboard**.
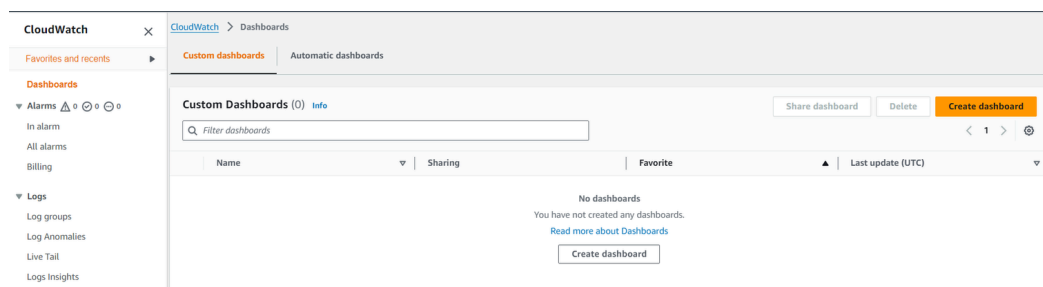
3. In the **Create new dashboard** dialog box, enter a name for the dashboard, and then choose **Create dashboard**.

4. After clicking the **Create dashboard**, an **Add widget** dialog box will display, and do the following for the widget configuration:

- **Data type –** Metrics
- **Widget Type** – Line
- Click **Next** button.
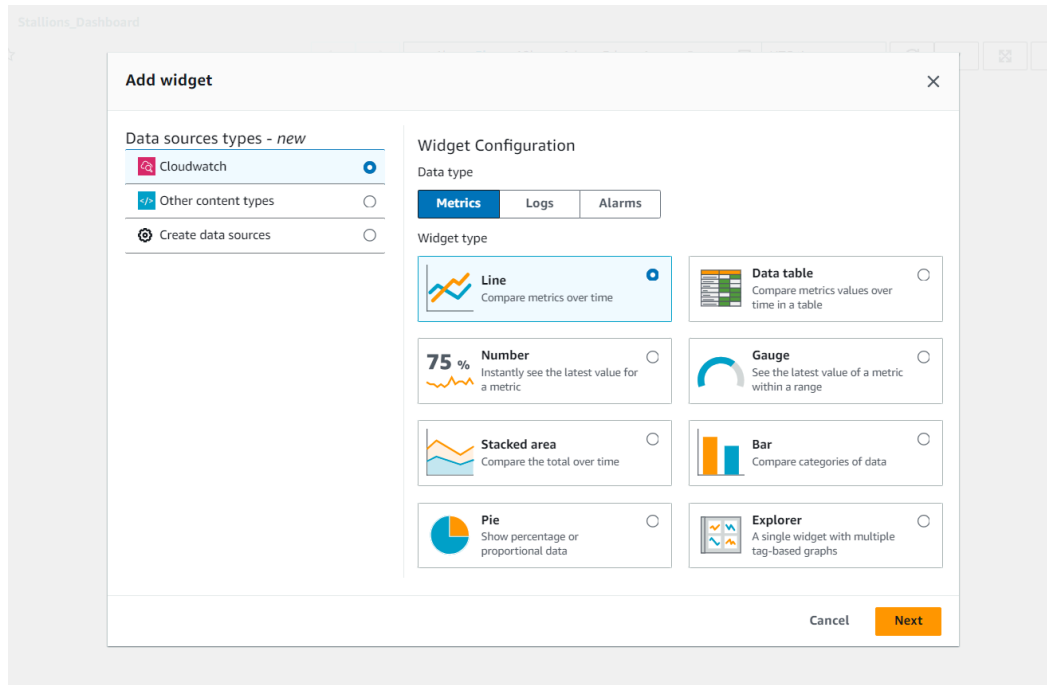
5. Configure the Metric that you want to add.

- Select the **AWS Namespace** for which you want to create a widget. For instance, EC2.

- Click **Per-Instance Metrics.**

Add metric graph

CPUUtilization

| Browse | Multi source query - *new* | Graphed metrics (1) | Options | Source |

Metrics (102)

N. Virginia ▼ | All > EC2 | 🔍 *Search for any metric, dimension, resource id or account id*

| Per-Instance Metrics | 102 |

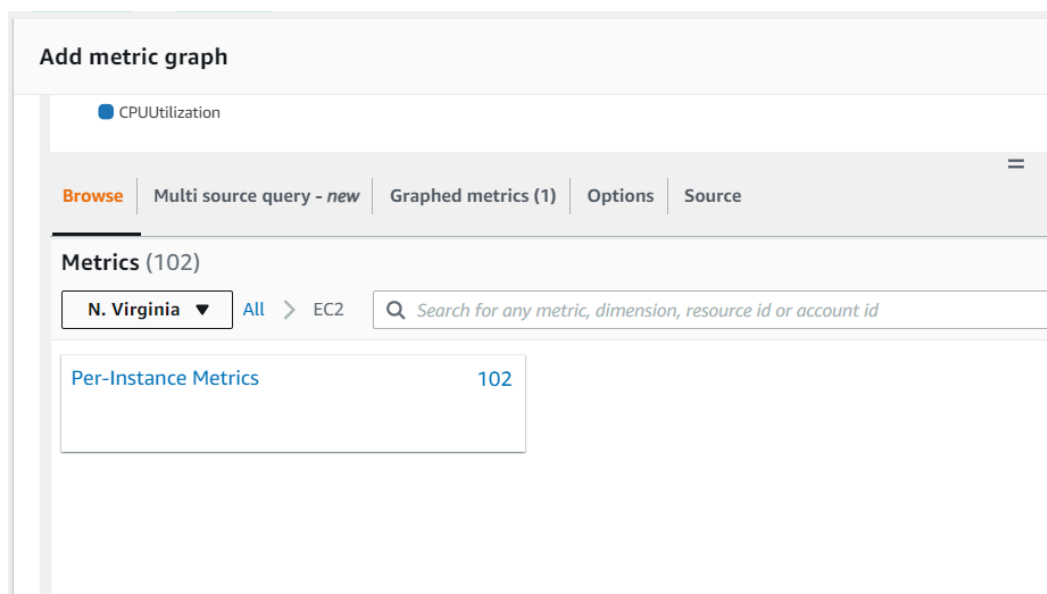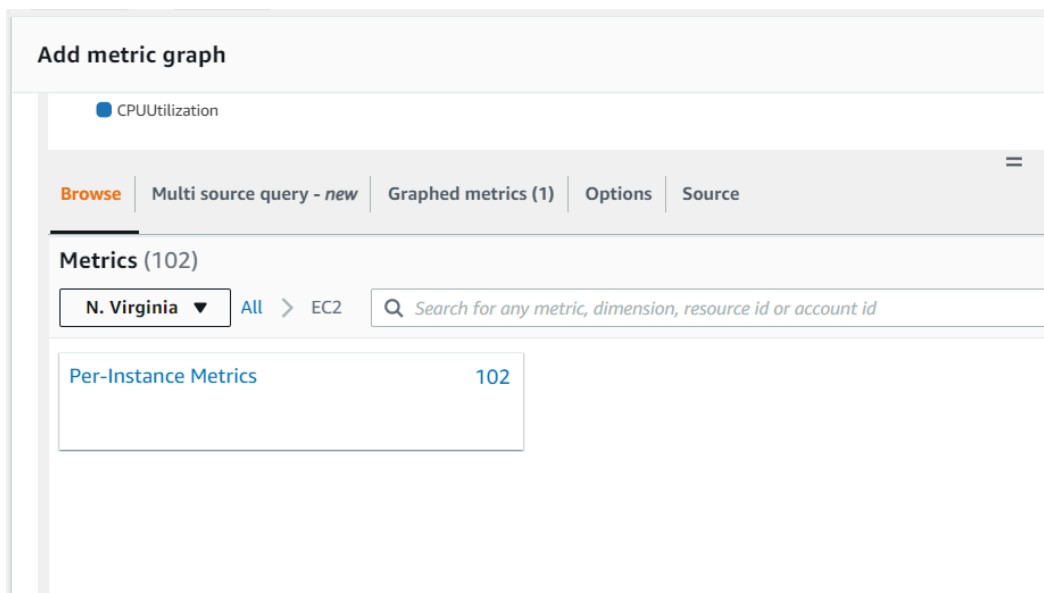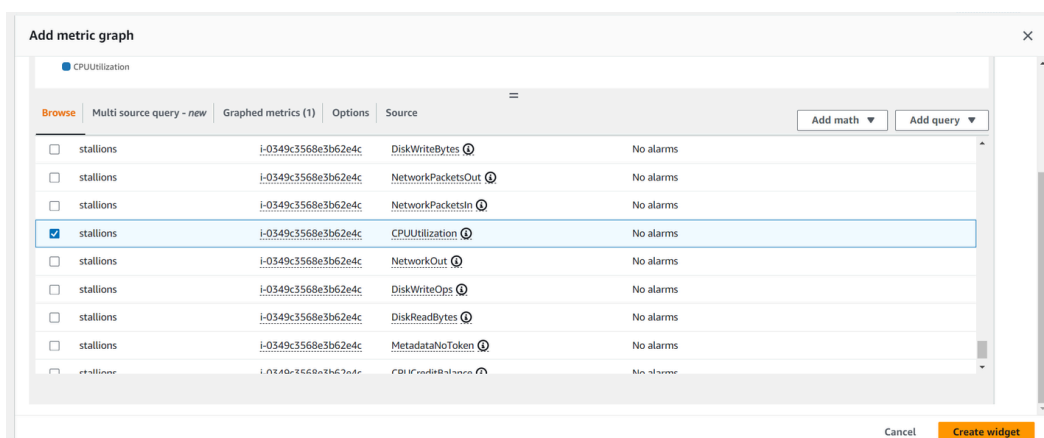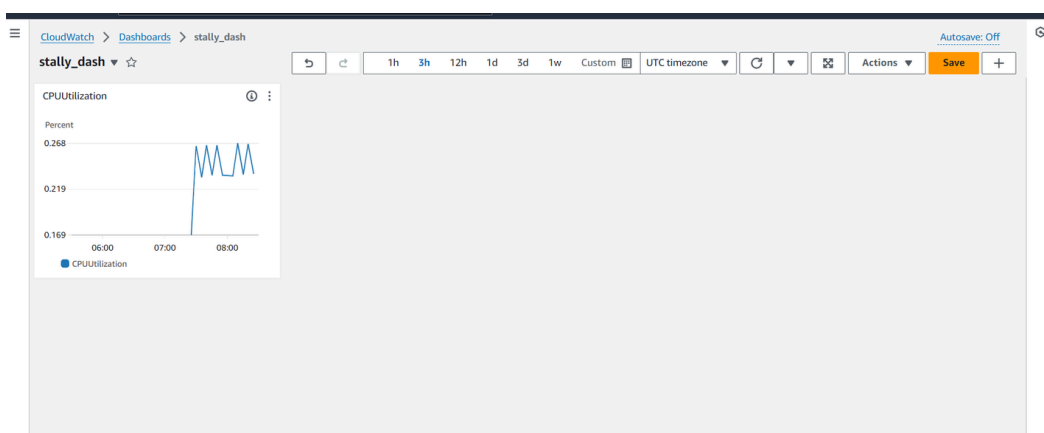- Choose the metric that you want to add as a widget. For instance, the **CPUUtilization,** then click **Create Widget.**
 Make sure that the instance ID is the same as the EC2 Instance ID that you copied earlier. You can also paste the instance ID on the search bar to find it more easily.

Add metric graph   ✕

CPUUtilization

| Browse | Multi source query - *new* | Graphed metrics (1) | Options | Source | Add math ▼   Add query ▼

☐	stallions	i-0349c3568e3b62e4c	DiskWriteBytes ⓘ	No alarms
☐	stallions	i-0349c3568e3b62e4c	NetworkPacketsOut ⓘ	No alarms
☐	stallions	i-0349c3568e3b62e4c	NetworkPacketsIn ⓘ	No alarms
☑	stallions	i-0349c3568e3b62e4c	CPUUtilization ⓘ	No alarms
☐	stallions	i-0349c3568e3b62e4c	NetworkOut ⓘ	No alarms
☐	stallions	i-0349c3568e3b62e4c	DiskWriteOps ⓘ	No alarms
☐	stallions	i-0349c3568e3b62e4c	DiskReadBytes ⓘ	No alarms
☐	stallions	i-0349c3568e3b62e4c	MetadataNoToken ⓘ	No alarms
☐	stallions	i-0349c3568e3b62e4c	CPUCreditBalance ⓘ	No alarms

Cancel   **Create widget**

- It will be added to the **Dashboard.**

CloudWatch > Dashboards > stally_dash   Autosave: Off

stally_dash ▼ ☆ | ↺ ↻ | 1h 3h 12h 1d 3d 1w Custom | UTC timezone ▼ | ↻ ▼ | Actions ▼ | **Save** | +

CPUUtilization   ⓘ ⋮
Percent
0.268
0.219
0.169
        06:00   07:00   08:00
CPUUtilization

- To add additional widgets to your dashboard, you can by selecting the "**+**"icon.Repeat **steps 4 to 5** until all needed widgets are added and select **Save Dashboard.**
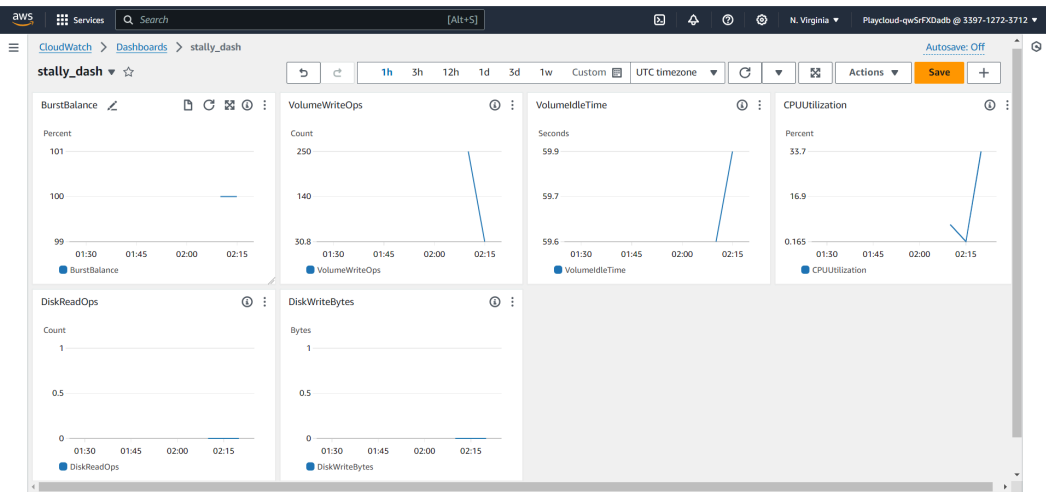
That's it! Congratulations on completing the lab. You just learned how to create your own CloudWatch Dashboard.