

Assignment: EC2 Monitoring - CloudWatch Dashboard

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Problem Statement

You work for XYZ Corporation. To maintain the security of the AWS account and its resources, you have been asked to implement a solution that helps easily recognize and monitor different users. Additionally, you are required to monitor the machines (EC2 instances) created by these users for any performance issues, errors, or misconfigurations.

Objective

Create an AWS CloudWatch Dashboard to monitor the CPU utilization and network metrics (Network In and Network Out) of a particular EC2 instance.

Tasks to be Performed

Step 1 — Open CloudWatch Dashboard

1. In the AWS Management Console, navigate to CloudWatch.
2. In the left-hand menu, click Dashboards → Create dashboard.
3. Enter a name for your dashboard, for example: EC2-Monitoring-Dashboard.
4. Click Create dashboard.

Step 2 — Add CPU Utilization Widget

1. Choose Line widget and click Next.
2. In the Metrics section, go to Browse → EC2 → Per-Instance Metrics.
3. Select your instance ID and check the metric CPUUtilization.
4. Click Create widget. This displays the CPU usage graph over time.

Add widget

Data sources types

☒ Cloudwatch

☐ Other content types

☐ Create data sources

Widget Configuration

Data type

Metrics

Logs

Alarms

Widget type

☒ Line

Compare metrics over time

☐ Data table

Compare metrics values over time in a table

☐ Number

Instantly see the latest value for a metric

75 %

☐ Stacked area

Compare the total over time

☐ Gauge

See the latest value of a metric within a range

☐ Bar

Compare categories of data

Cancel

Next

Add metric graph

Untitled graph

1h3h12h1d3d1wCustom

UTC timezone

Line

1

0.5

0

07:4508:0008:1508:3008:4509:0009:1509:3009:4510:0010:1510:30

Your CloudWatch graph is empty.
Select some metrics to appear here.

Browse (1,742)

Multi source query

Graphed metrics

Options

Source

Add math

Add query

ApplicationELB83

Bedrock/DataAutomation5

DynamoDB20

EBS273

EC2449

HealthLake6

Lambda17

Location8

Logs16

NATGateway32

RDS120

Rekognition6

Add metric graph

Untitled graph

1h3h12h1d3d1wCustom

UTC timezone

Line

1

0.5

0

07:4508:0008:1508:3008:4509:0009:1509:3009:4510:0010:1510:30

Your CloudWatch graph is empty.
Select some metrics to appear here.

Browse (449)

Multi source query

Graphed metrics

Options

Source

Add math

Add query

EC2

Alarm recommendations

Graph with SQL

Graph search

N. Virginia

Search for any metric, dimension, resource id or account id

By Auto Scaling Group20

By Image (AMI) Id8

Per-Instance Metrics405

Aggregated by Instance Type8

Across All Instances8

Add metric graph



Untitled graph

1h 3h 12h 1d 3d 1w Custom UTC timezone Line



Browse (405) Multi source query Graphed metrics Options Source

Per-Instance Metrics

N. Virginia

Search for any metric, dimension, resource id or account id

Instance name 100/405	Instanceid	Metric name	Alarms
No name specified	i-0578693c915bdf...	StatusCheckFailed_System	No alarms
No name specified	i-0578693c915bdf...	StatusCheckFailed	No alarms

Add math Add query

Alarm recommendations

Graph with SQL Graph search

1 2 3 4 5

Cancel Create widget

Add metric graph



Untitled graph

1h 3h 12h 1d 3d 1w Custom UTC timezone Line



Browse (12) Multi source query Graphed metrics Options Source

Per-Instance Metrics

N. Virginia

Search for any metric, dimension, resource id or account id

i-0e5c65ead1fd5969f Clear filters

Instance name 12/12	Instanceid	Metric name	Alarms
demo instance	i-0e5c65ead1fd59...	EBSWriteOps	No alarms

Add math Add query

Alarm recommendations

Graph with SQL Graph search

1

Cancel Create widget

Add metric graph



CPUUtilization

Persist time range 1h 3h 12h 1d 3d 1w Custom UTC timezone Line

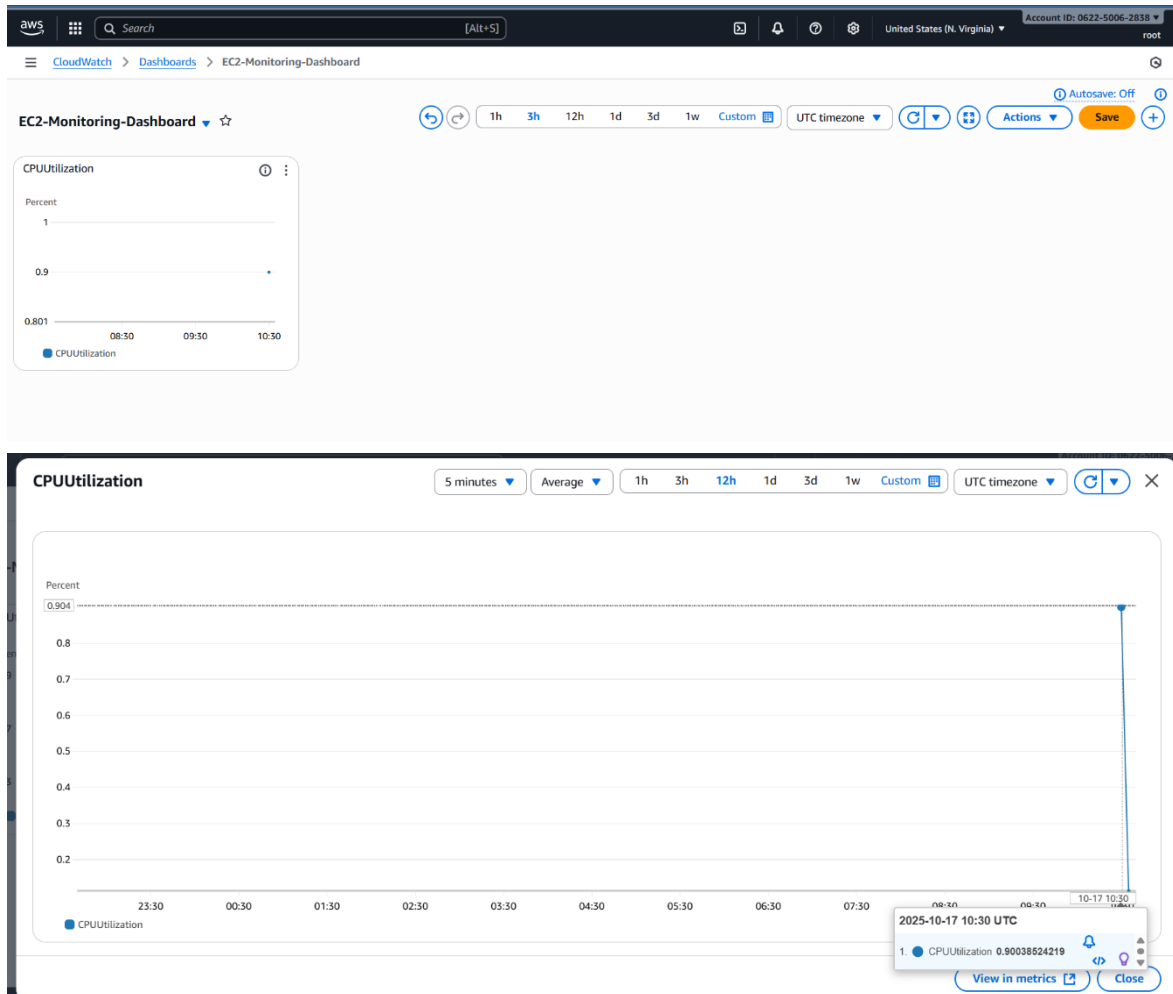


Browse (12) Multi source query Graphed metrics (1) Options Source

demo instance	i-0e5c65ead1fd59...	MetadataNoToken	No alarms
demo instance	i-0e5c65ead1fd59...	NetworkIn	No alarms
demo instance	i-0e5c65ead1fd59...	NetworkPacketsIn	No alarms
<input checked="" type="checkbox"/> demo instance	i-0e5c65ead1fd59...	CPUUtilization	No alarms
demo instance	i-0e5c65ead1fd59...	NetworkPacketsOut	No alarms
demo instance	i-0e5c65ead1fd59...	NetworkOut	No alarms

Add math Add query

Cancel Create widget



Step 3 — Add Networking Widgets (Network In & Network Out)

1. In the same dashboard, click Add widget → Line widget.
2. Go to Metrics → EC2 → Per-Instance Metrics.
3. Select your instance ID & and check the NetworkIn and NetworkOut metrics.
4. Click Create widget.

Now your dashboard shows CPU utilization and network traffic for that instance.

Add metric graph

NetworkIn, NetworkOut

☐ Persist time range

1h 3h 12h 1d 3d 1w Custom

UTC timezone

Line

⌂ ⌵



Browse (16)

Multi source query

Graphed metrics (2)

Options

Source

Add math

Add query

<input type="checkbox"/>	demo instance	i-0e5c65ead1fd59...	MetadataNoToken	No alarms
<input checked="" type="checkbox"/>	demo instance	i-0e5c65ead1fd59...	NetworkIn	No alarms
<input type="checkbox"/>	demo instance	i-0e5c65ead1fd59...	NetworkPacketsIn	No alarms
<input type="checkbox"/>	demo instance	i-0e5c65ead1fd59...	CPUUtilization	No alarms
<input type="checkbox"/>	demo instance	i-0e5c65ead1fd59...	NetworkPacketsOut	No alarms
<input checked="" type="checkbox"/>	demo instance	i-0e5c65ead1fd59...	NetworkOut	No alarms

Cancel

Create widget

CloudWatch > Dashboards > EC2-Monitoring-Dashboard

EC2-Monitoring-Dashboard

⌂ ⌵

1h 3h 12h 1d 3d 1w Custom

UTC timezone

⌂ ⌵

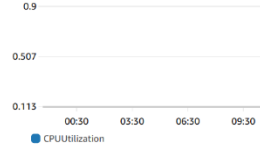
Actions

Save

⌵

CPUUtilization

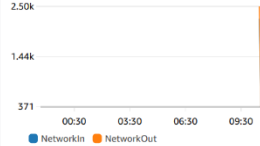
Percent



CPUUtilization

NetworkIn, NetworkOut

Bytes



NetworkIn NetworkOut

NetworkIn, NetworkOut

5 minutes

Average

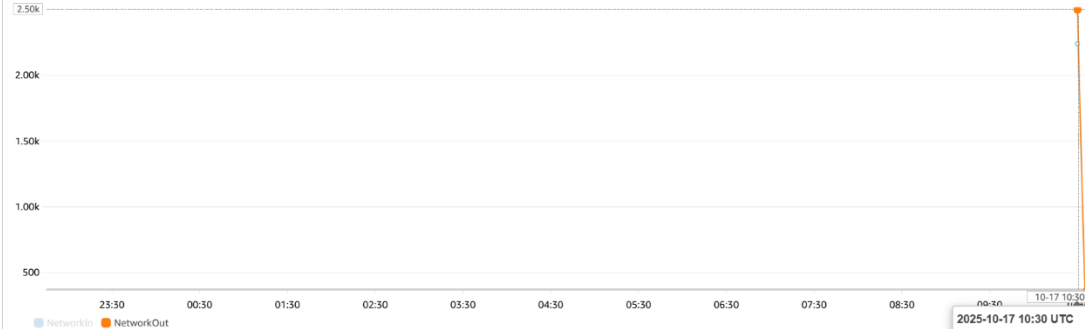
1h 3h 12h 1d 3d 1w Custom

UTC timezone

⌂ ⌵

⌵

Bytes



NetworkIn NetworkOut

2025-10-17 10:30 UTC

1. NetworkOut 2,499

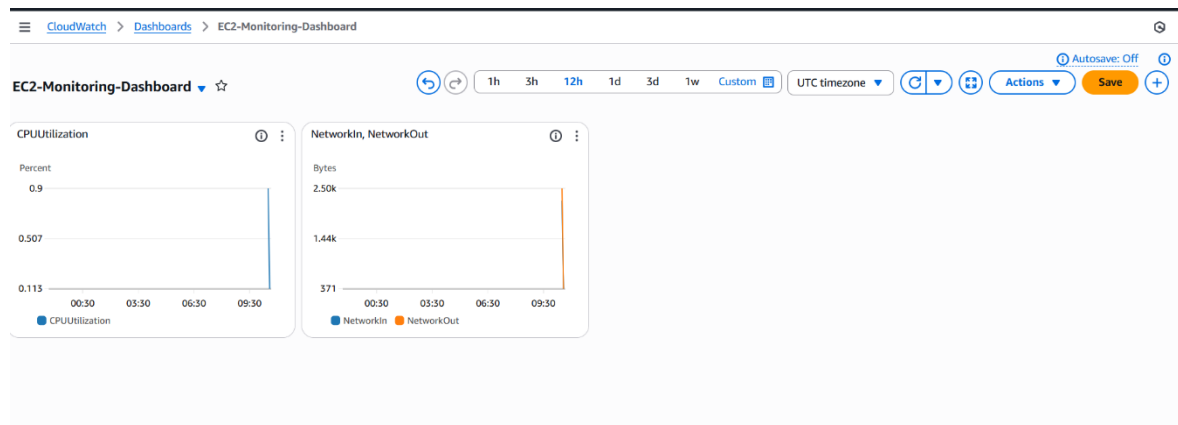
2. NetworkIn 2,240

View in metrics

Close

Step 4 — Adjust Time Range and Layout

1. On the top-right of the dashboard, choose a time range (e.g., Last 1 hour or Last 24 hours).
2. Rearrange widgets to make the view clear.
3. Click Save dashboard to preserve your layout.



Result

Successfully created a CloudWatch Dashboard named EC2-Monitoring-Dashboard. The dashboard monitors key metrics — CPU utilization, NetworkIn, and NetworkOut — for a specific EC2 instance. This enables real-time performance tracking and helps detect any potential performance issues or misconfigurations efficiently.