Ganpat University | Institute of Computer Technology
॥ विद्यया समाजोत्कर्षः ॥

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**Sub: CCE(Cloud Computing Essentials)**

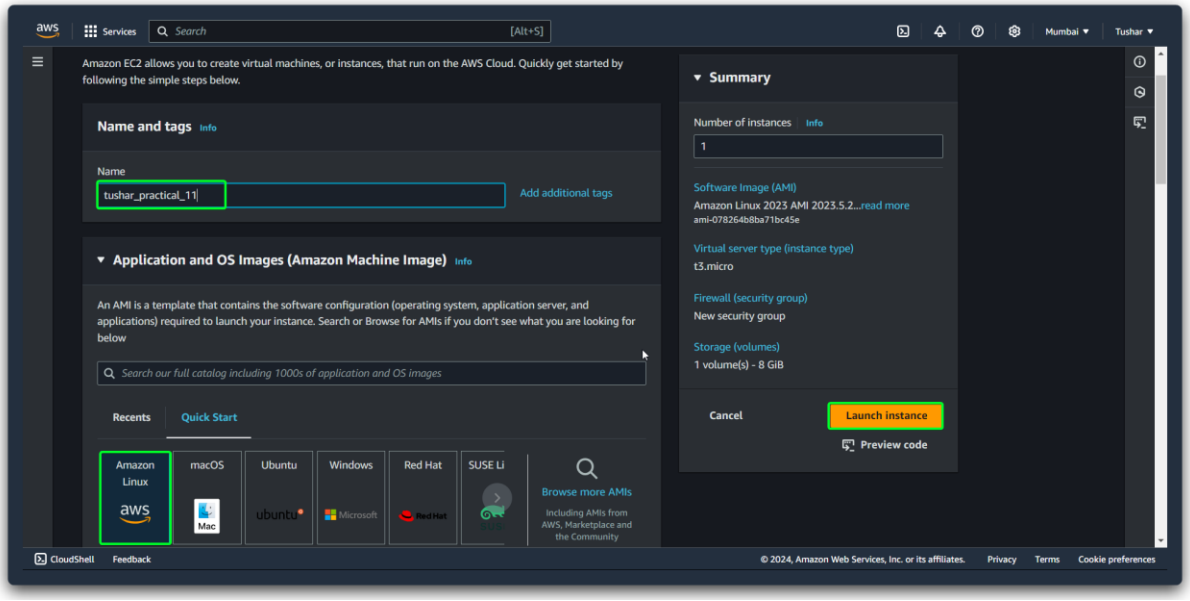
**Branch: CBA**

**Batch:61**

# ----------PRACTICAL 11----------

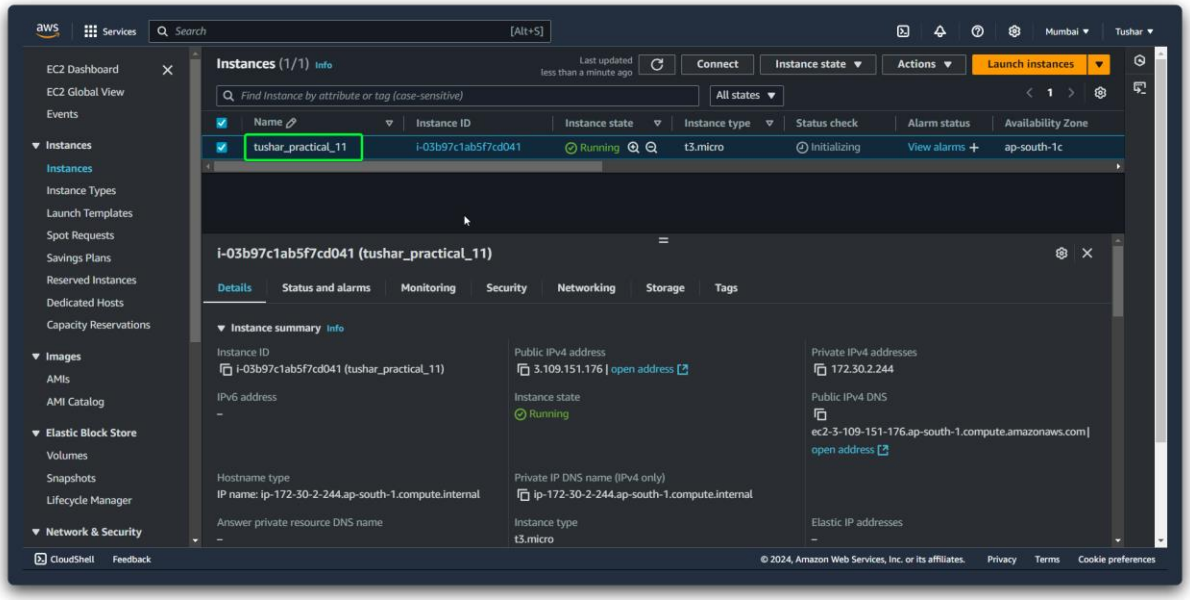
**Create a Custom CloudWatch Dashboard for EC2 Instance and monitor different metrics.**
**Create a Zero-Spend Budget**

## First go to EC2 and Launch new instance

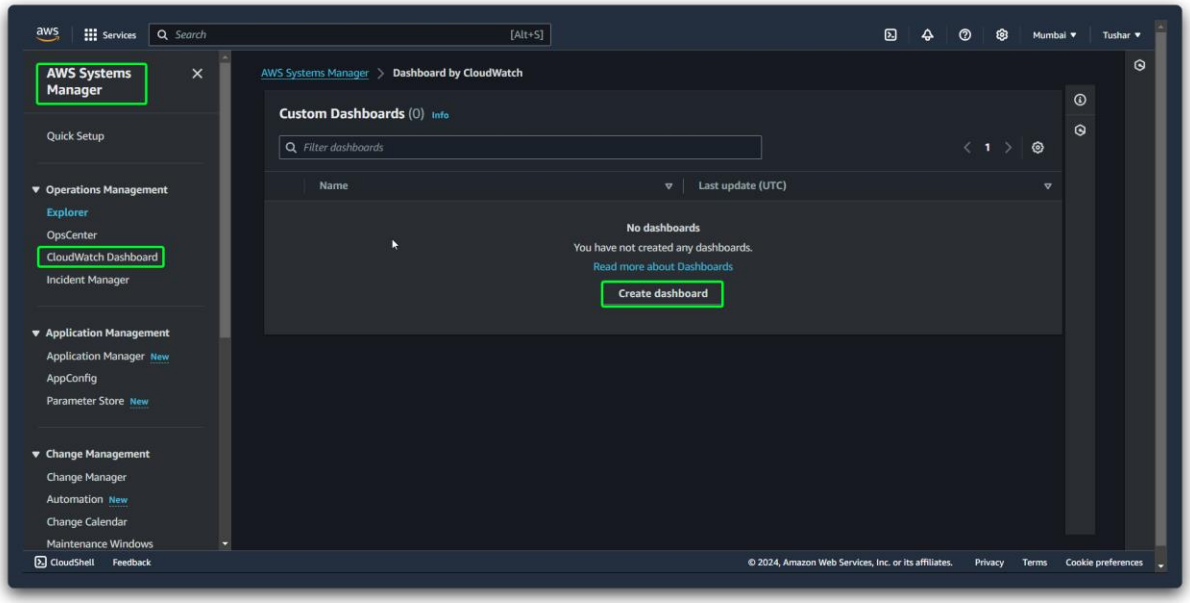



**Select amazon linux in OS and name it and then hit launch instance button**

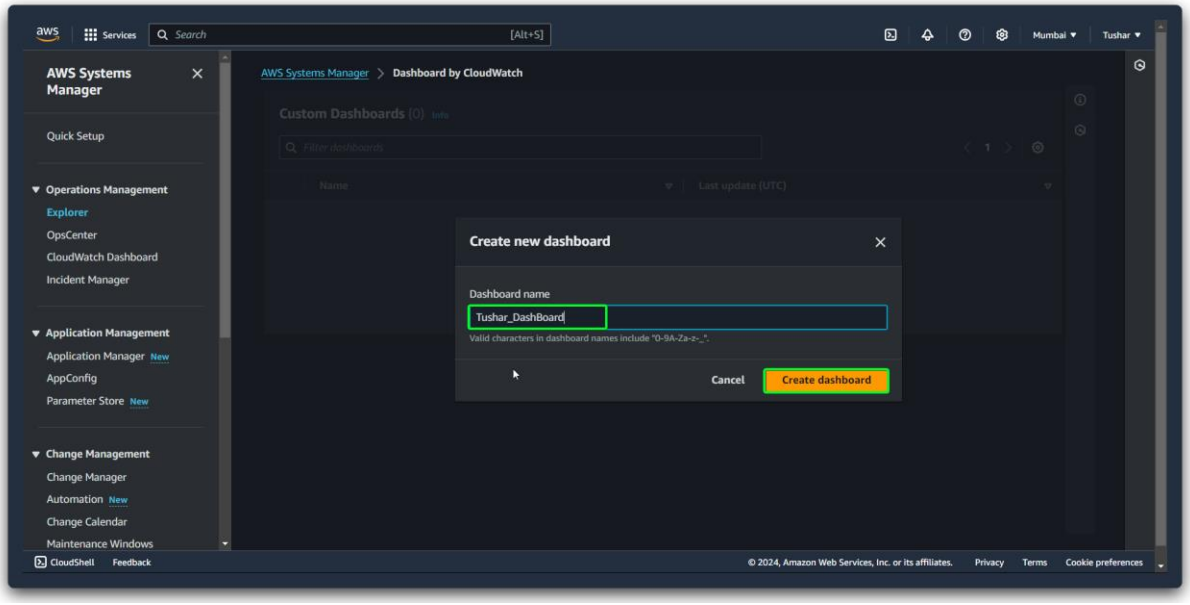
**As you can see below I launched instance successfully**



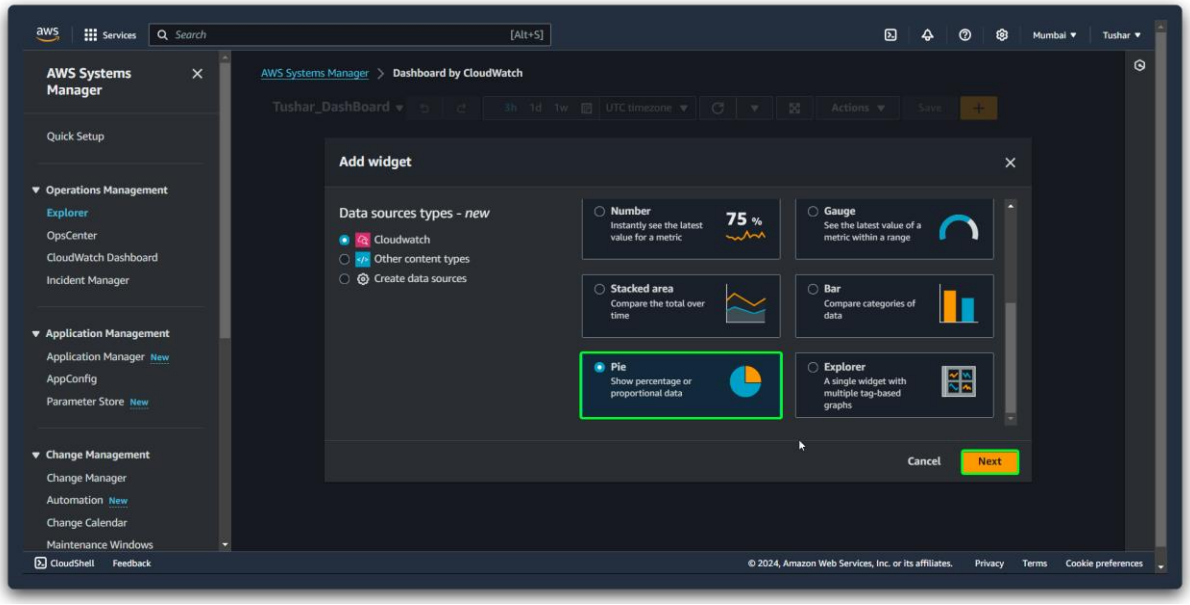

**Now search for AWS systems manager and go to cloudwatch dashboard and hit create dashboard**



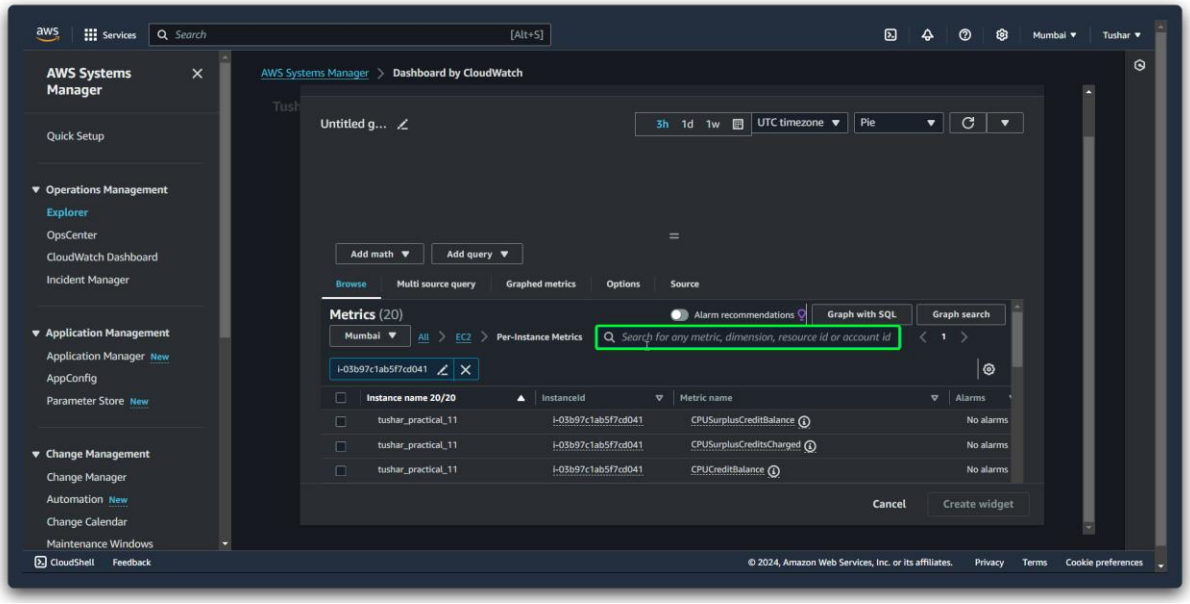
**Name it and hit create dashboard button**



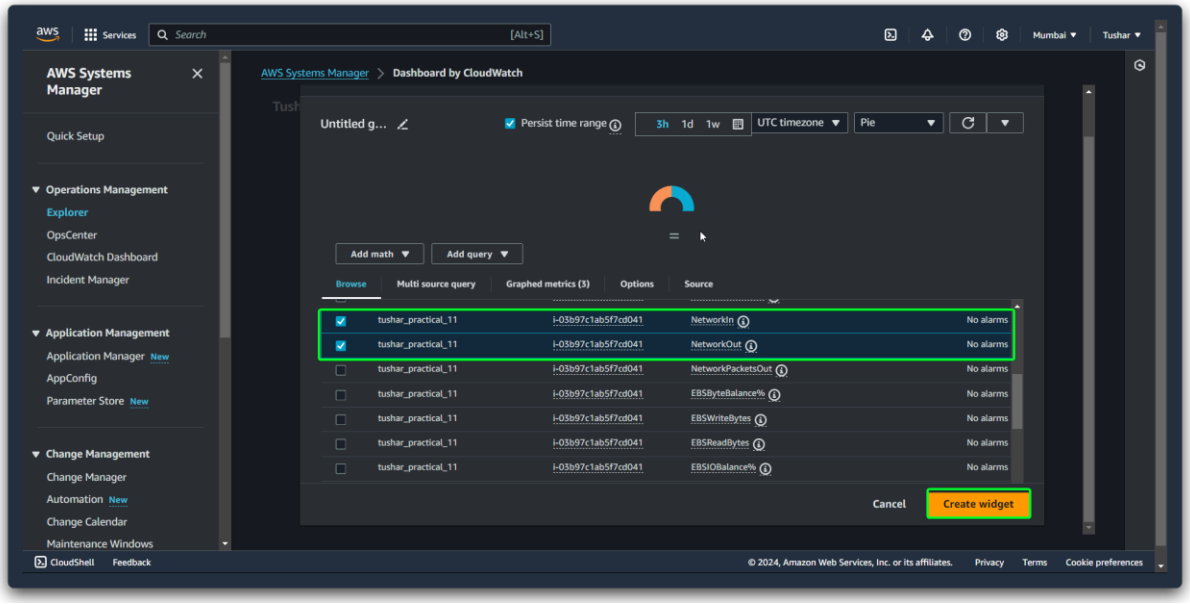

**Now select widget type as you want I selected pie and hit next**

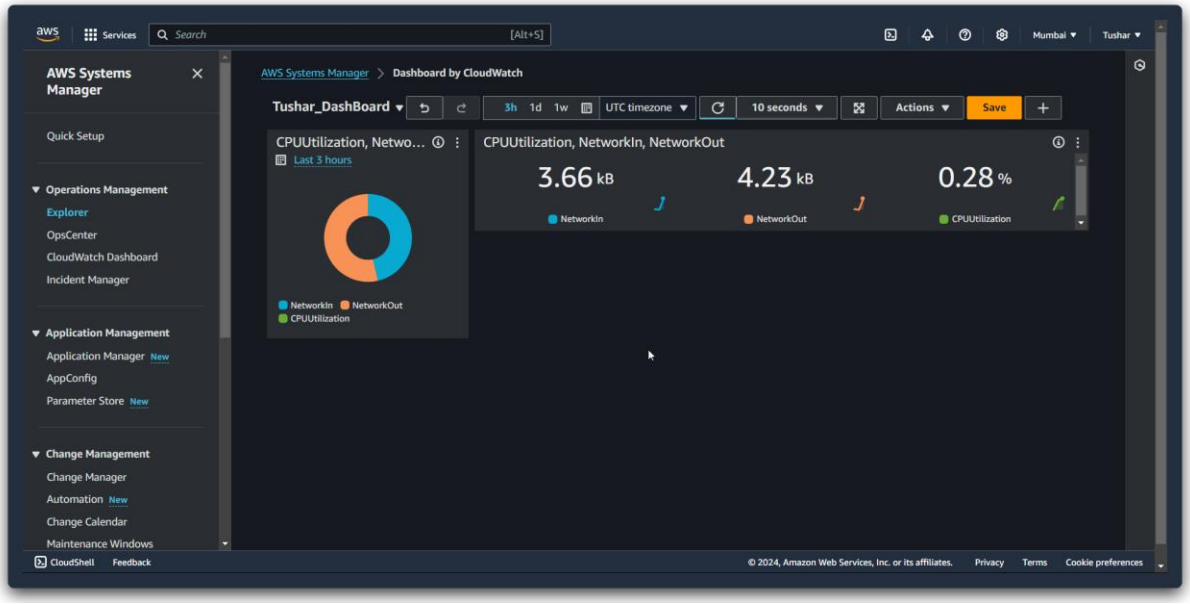



**Then enter your instance id to monitor it**



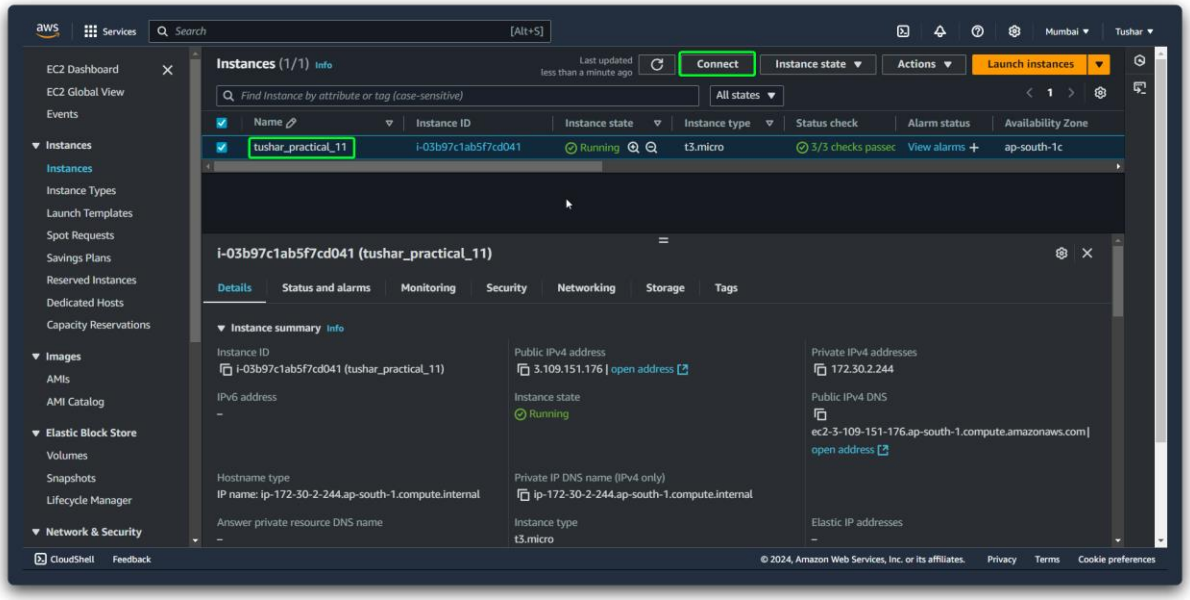

**Then select Networkin, Networkout and cpuutilization to monitor**



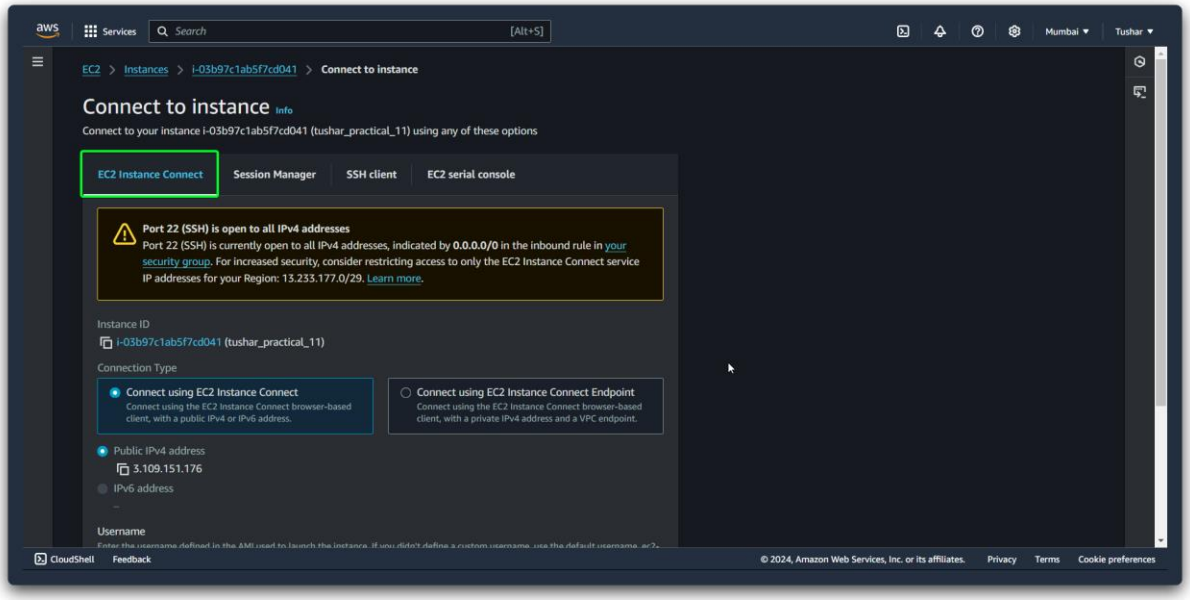



**As you can see our widget created successfully above.**

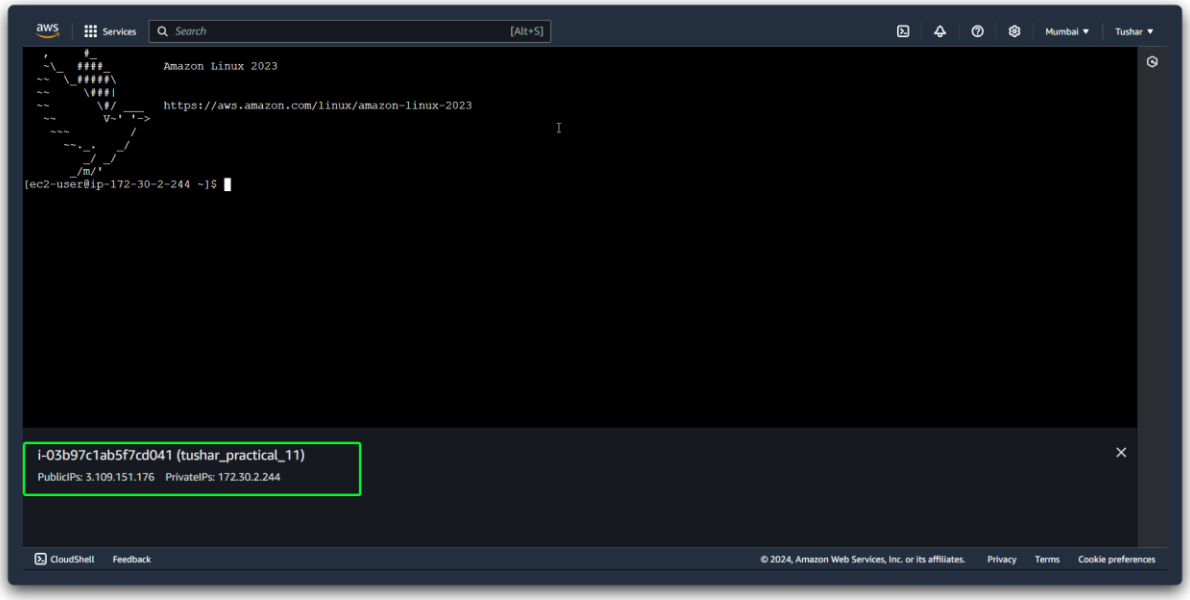
**Now go to instances and select instance hit connect button**



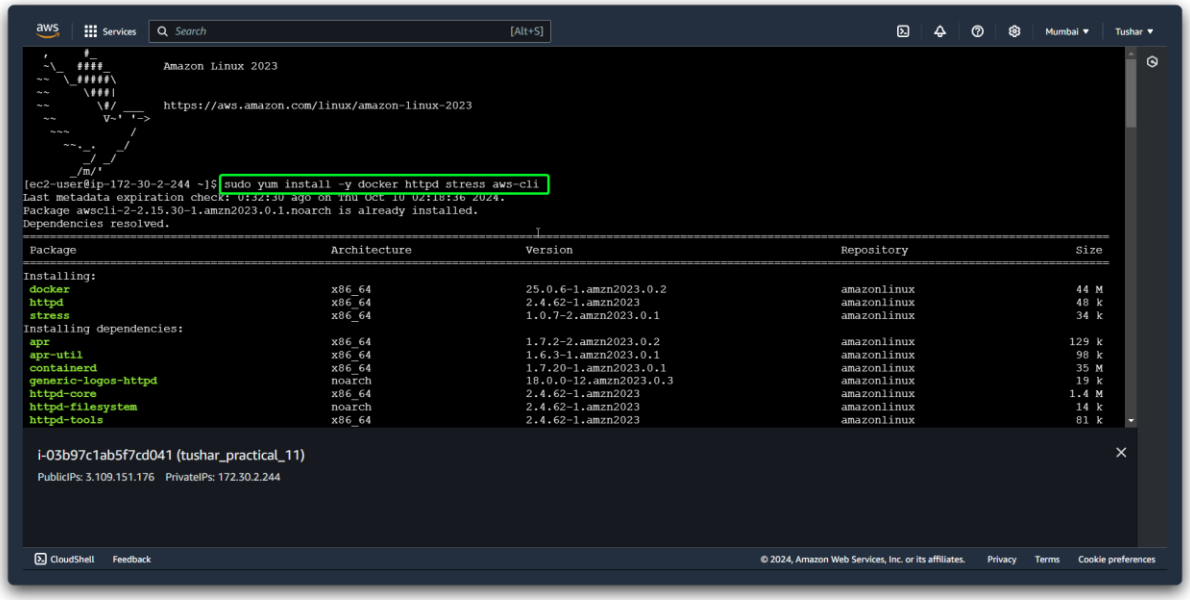
**Then select EC2 instance connect and hit connect button below**




**As you can see my AWS Linux CLI of my instance connected and launched successfully.**




**Now run this command to install any application**


Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-172-30-2-244 ~]$ sudo yum install -y docker httpd stress aws-cli
Last metadata expiration check: 0:32:30 ago on Thu Oct 10 02:18:36 2024.
Package awscli-2-2.15.30-1.amzn2023.0.1.noarch is already installed.
Dependencies resolved.
Package Architecture Version Repository Size
Installing:
docker x86_64 25.0.6-1.amzn2023.0.2 amazonlinux 44 M
httpd x86_64 2.4.62-1.amzn2023 amazonlinux 48 k
stress x86_64 1.0.7-2.amzn2023.0.1 amazonlinux 34 k
Installing dependencies:
apr x86_64 1.7.2-2.amzn2023.0.2 amazonlinux 129 k
apr-util x86_64 1.6.3-1.amzn2023.0.1 amazonlinux 98 k
containerd x86_64 1.7.20-1.amzn2023.0.1 amazonlinux 35 M
generic-logos-httpd noarch 18.0.0-12.amzn2023.0.3 amazonlinux 19 k
httpd-core x86_64 2.4.62-1.amzn2023 amazonlinux 1.4 M
httpd-filesystem noarch 2.4.62-1.amzn2023 amazonlinux 14 k
httpd-tools x86_64 2.4.62-1.amzn2023 amazonlinux 81 k
i-03b97c1ab5f7cd041 (tushar_practical_11)
PublicIPs: 3.109.151.176 PrivateIPs: 172.30.2.244
CloudShell Feedback
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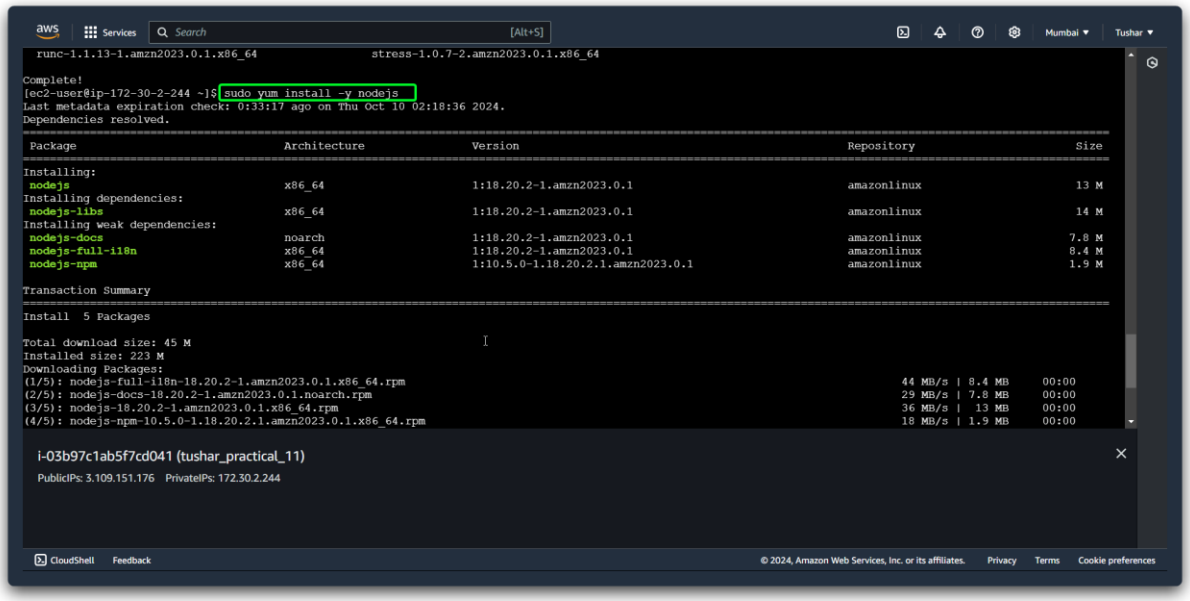
runc-1.1.13-1.amzn2023.0.1.x86_64 stress-1.0.7-2.amzn2023.0.1.x86_64
Complete!
[ec2-user@ip-172-30-2-244 ~]$ sudo yum install -y nodejs
Last metadata expiration check: 0:33:17 ago on Thu Oct 10 02:18:36 2024.
Dependencies resolved.
Package Architecture Version Repository Size
Installing:
nodejs x86_64 1:18.20.2-1.amzn2023.0.1 amazonlinux 13 M
Installing dependencies:
nodejs-libs x86_64 1:18.20.2-1.amzn2023.0.1 amazonlinux 14 M
Installing weak dependencies:
nodejs-docs noarch 1:18.20.2-1.amzn2023.0.1 amazonlinux 7.8 M
nodejs-full-i18n x86_64 1:18.20.2-1.amzn2023.0.1 amazonlinux 8.4 M
nodejs-npm x86_64 1:10.5.0-1.18.20.2.1.amzn2023.0.1 amazonlinux 1.9 M
Transaction Summary
Install 5 Packages
Total download size: 45 M
Installed size: 223 M
Downloading Packages:
(1/5): nodejs-full-i18n-18.20.2-1.amzn2023.0.1.x86_64.rpm 44 MB/s | 8.4 MB 00:00
(2/5): nodejs-docs-18.20.2-1.amzn2023.0.1.noarch.rpm 29 MB/s | 7.8 MB 00:00
(3/5): nodejs-18.20.2-1.amzn2023.0.1.x86_64.rpm 36 MB/s | 13 MB 00:00
(4/5): nodejs-npm-10.5.0-1.18.20.2.1.amzn2023.0.1.x86_64.rpm 18 MB/s | 1.9 MB 00:00
i-03b97c1ab5f7cd041 (tushar_practical_11)
PublicIPs: 3.109.151.176 PrivateIPs: 172.30.2.244
CloudShell Feedback
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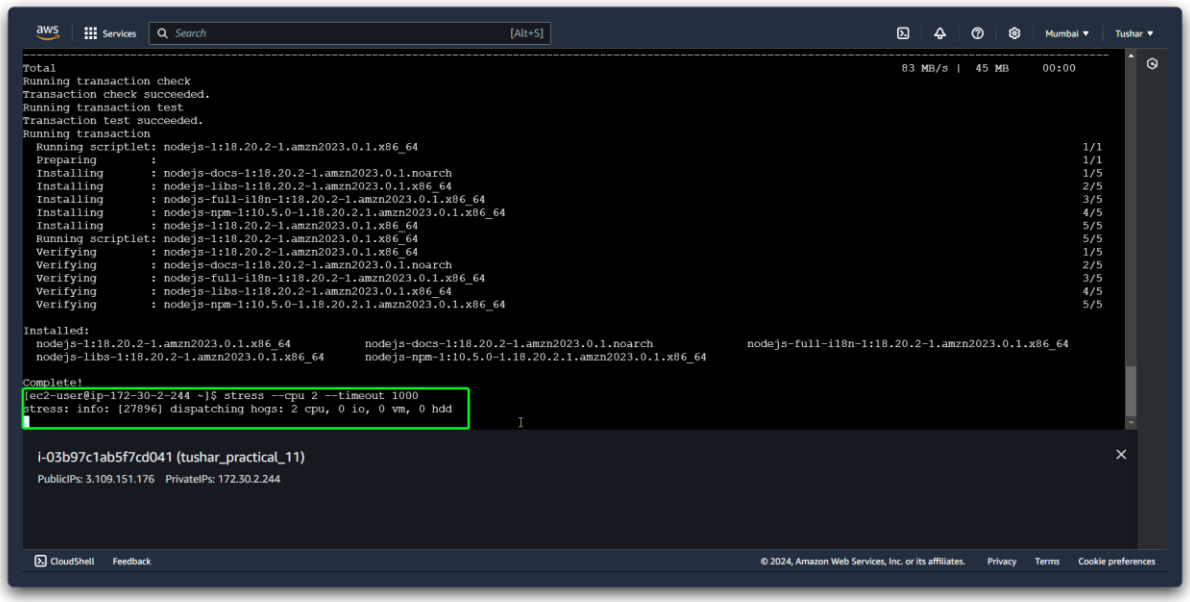
Total 83 MB/s | 45 MB 00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Running scriptlet: nodejs-1:18.20.2-1.amzn2023.0.1.x86_64 1/1
Preparing : 1/1
Installing : nodejs-docs-1:18.20.2-1.amzn2023.0.1.noarch 1/5
Installing : nodejs-libs-1:18.20.2-1.amzn2023.0.1.x86_64 2/5
Installing : nodejs-full-i18n-1:18.20.2-1.amzn2023.0.1.x86_64 3/5
Installing : nodejs-npm-1:10.5.0-1.18.20.2.1.amzn2023.0.1.x86_64 4/5
Installing : nodejs-1:18.20.2-1.amzn2023.0.1.x86_64 5/5
Running scriptlet: nodejs-1:18.20.2-1.amzn2023.0.1.x86_64 5/5
Verifying : nodejs-1:18.20.2-1.amzn2023.0.1.x86_64 1/5
Verifying : nodejs-docs-1:18.20.2-1.amzn2023.0.1.noarch 2/5
Verifying : nodejs-full-i18n-1:18.20.2-1.amzn2023.0.1.x86_64 3/5
Verifying : nodejs-libs-1:18.20.2-1.amzn2023.0.1.x86_64 4/5
Verifying : nodejs-npm-1:10.5.0-1.18.20.2.1.amzn2023.0.1.x86_64 5/5
Installed:
nodejs-1:18.20.2-1.amzn2023.0.1.x86_64 nodejs-docs-1:18.20.2-1.amzn2023.0.1.noarch nodejs-full-i18n-1:18.20.2-1.amzn2023.0.1.x86_64
nodejs-libs-1:18.20.2-1.amzn2023.0.1.x86_64 nodejs-npm-1:10.5.0-1.18.20.2.1.amzn2023.0.1.x86_64
Complete!
[ec2-user@ip-172-30-2-244 ~]$ stress --cpu 2 --timeout 1000
stress: info: [27896] dispatching hogs: 2 cpu, 0 io, 0 vm, 0 hdd
i-03b97c1ab5f7cd041 (tushar_practical_11)
PublicIPs: 3.109.151.176 PrivateIPs: 172.30.2.244
CloudShell Feedback
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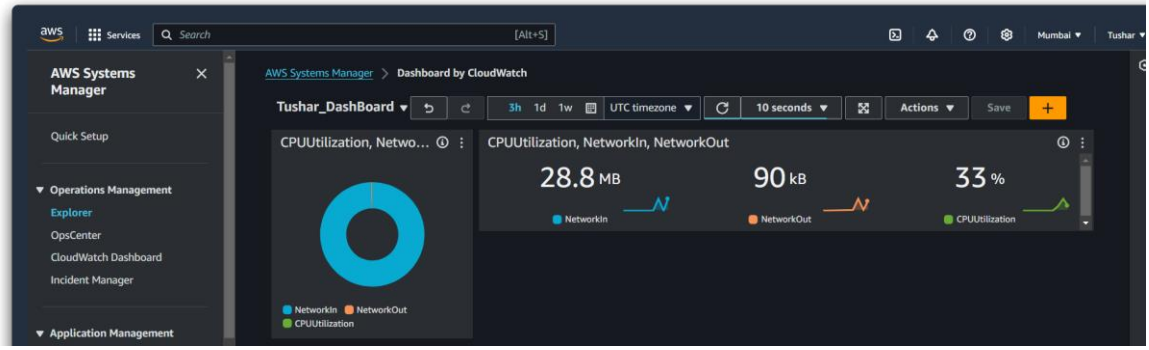
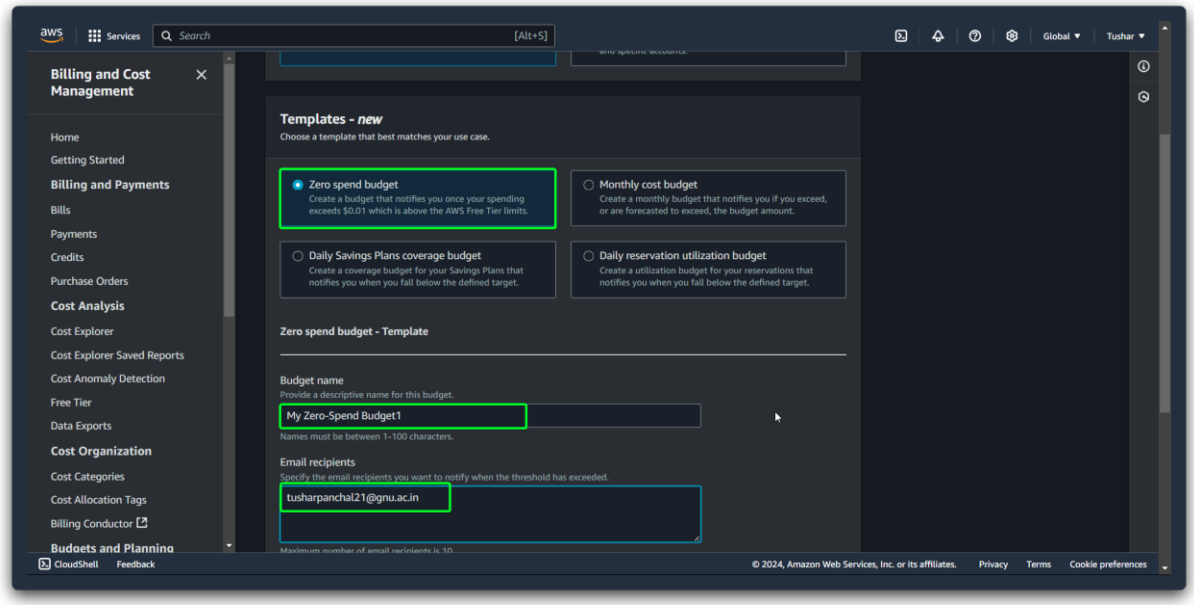
**As you can see below we can monitor our networkin and NetworkOut and CPU Utilization after we installed some softwares in our instance using commands as above screenshots and timeout cpu..etc.**



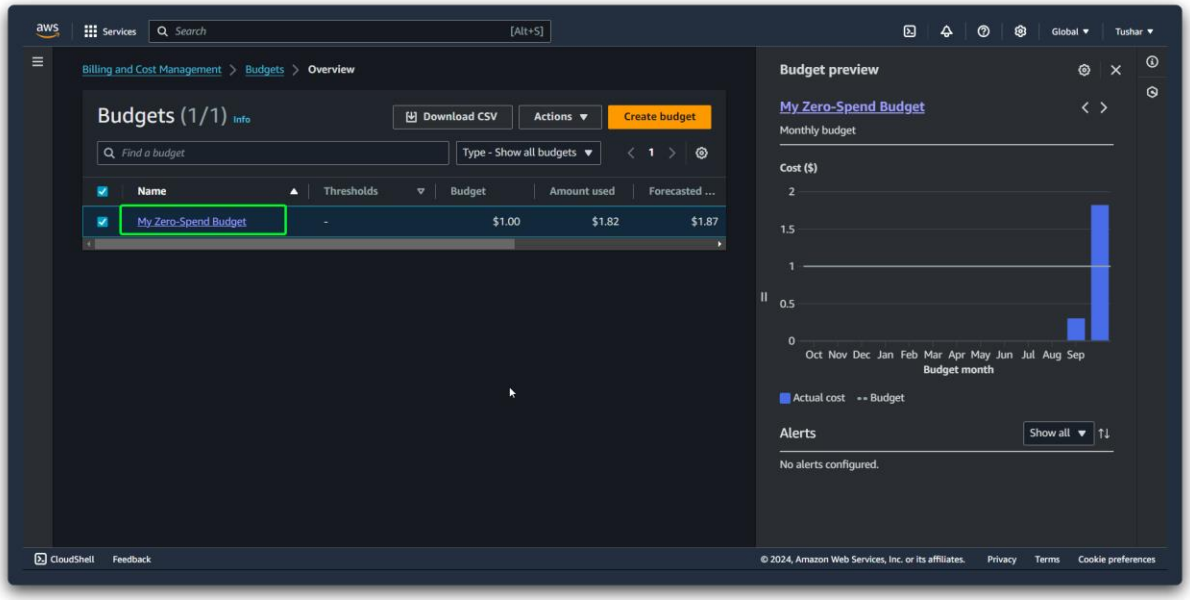

**Now create zero-spend budget as in this practical asked to do it**

**Go to billing and cost management and in budget section hit create budget**


**Select zero spend budget in template , name it and add your email to get notification if our bill goes over our budget it will notify us**




**Then hit create budget button simply**




**As you can see in above my zero-spend-budget has been created successfully.**