Project Name:

CI/CD Deployment for Spring Boot Application

This code is developed by:-Tata Sai Vineeth

This code for this project is hosted at:-

https://github.com/Sai153793/CI-CD-Deployment-for-spring-boot-application.git

Overview

Project Objective:

As a Full stack Developer, you have to build a CI/CD pipeline to demonstrate continuous deployment and host the application on AWSEC2 instance.

Goals

As the Project is in the final stage, management has asked you to automate the integration and deployment of the web application. You are required to set up an environment where the application will be hosted and accessed by users. The source code is supposed to be fetched from a GitHub repository.

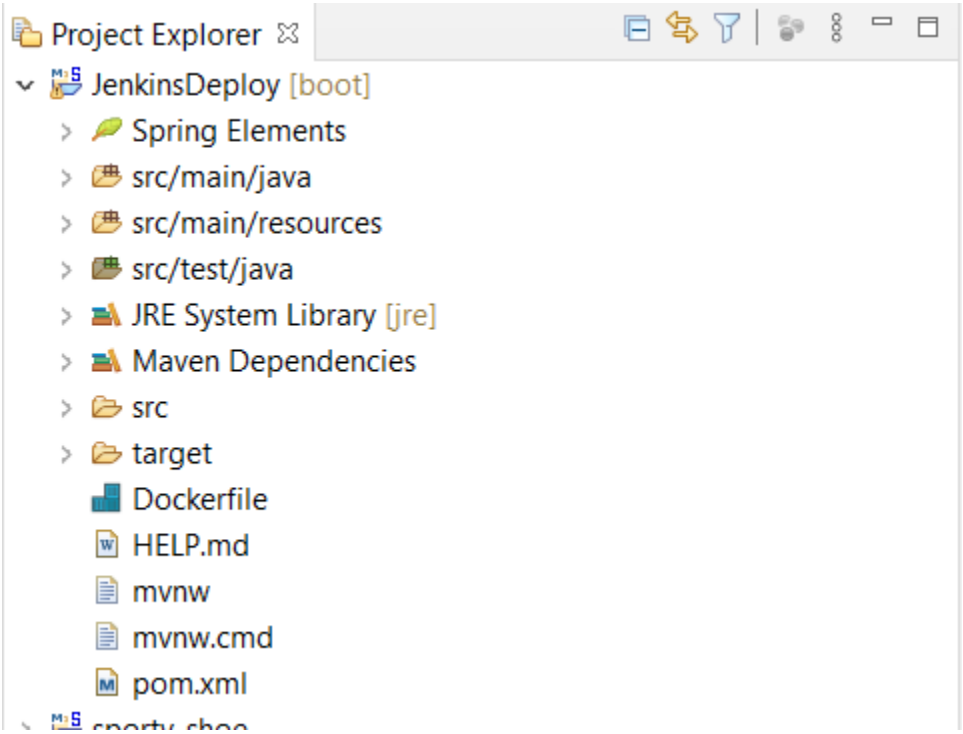
Toolsused

- Eclipse
- GitHub
- Jenkins
- AWSEC2/Virtualmachine

Specifications

- Apart of the source code should be tracked on the GitHub repository. You need to document the tracked files that are ignored during the final push to the GitHub repository.
- The submission of your GitHub repository link is mandatory. In order to track your task, you need to share the link of the repository in the document.
- The step-by-step process involved in completing this task should be documented.

ProjectExplorer



Sourcecode

User

application.properties | *User.java | JenkinsDeployApplication.java | Springinitilizer.java

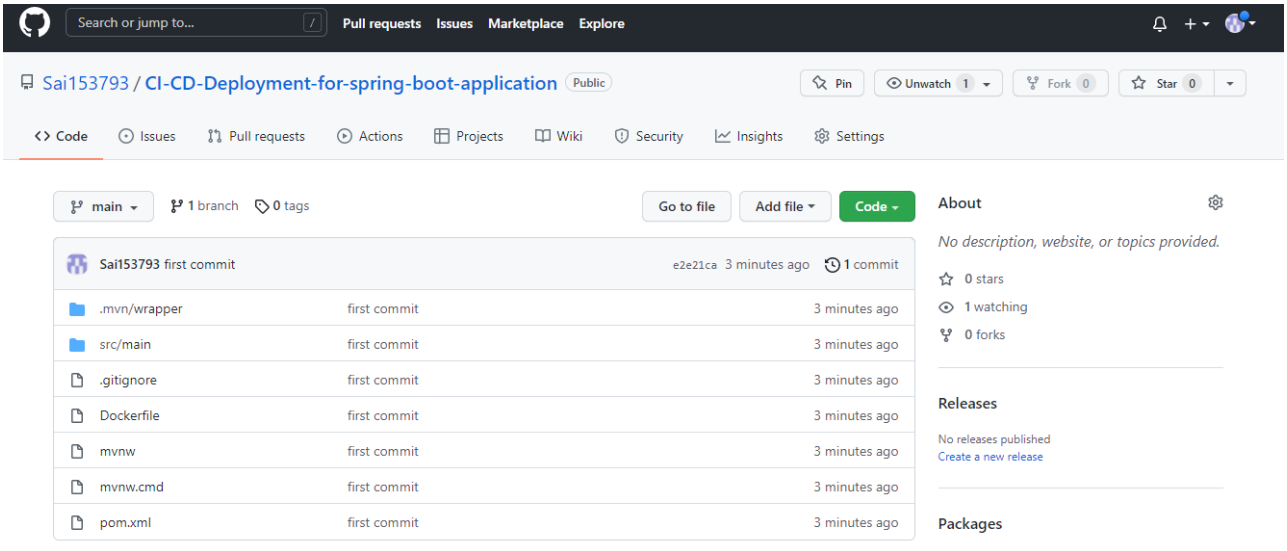
```java
package com.example.JenkinsDeploy;

import org.springframework.stereotype.Controller;

@Controller
public class User {

    @ResponseBody
    @RequestMapping("User")
public String  init ()
    {

        return "This is Sai vineeth spring boot app";

    }

}
```

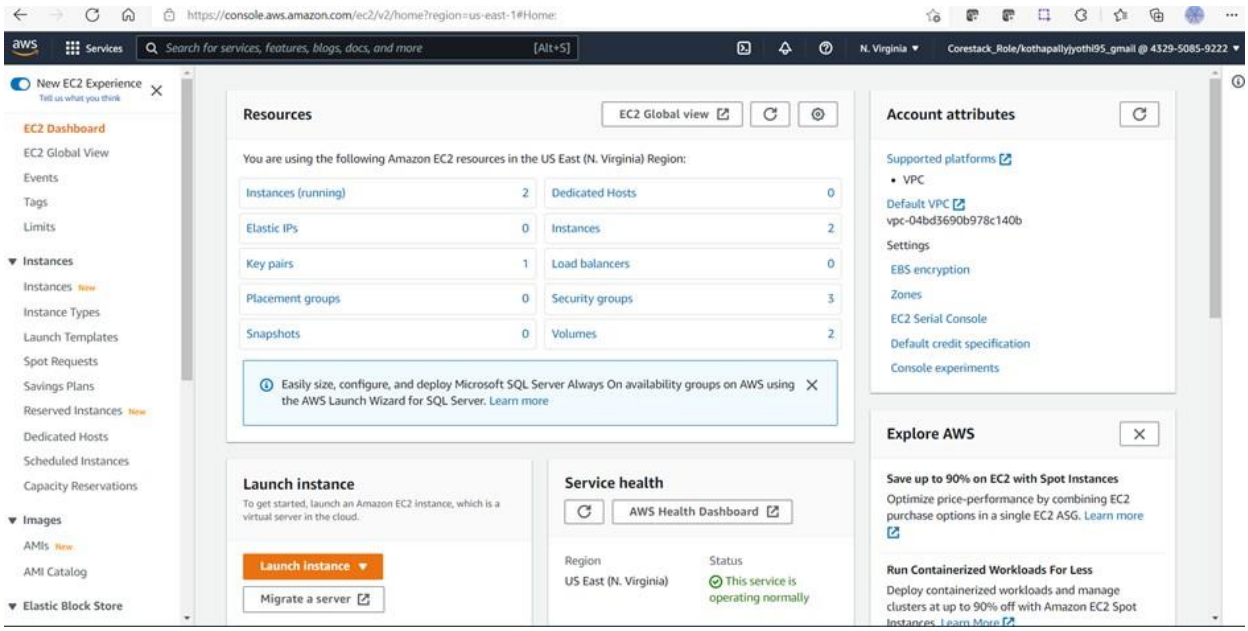
DockerFile

User.java | JenkinsDeployAppl... | Springinitilizer.ja... | Dockerfile | application.prop...

```
1 FROM openjdk:8
2 EXPOSE 8097
3 ADD target/JenkinsDeploy-0.0.1-SNAPSHOT.jar JenkinsDeploy-0.0.1-SNAPSHOT.jar
4 ENTRYPOINT ["java","-jar","/JenkinsDeploy-0.0.1-SNAPSHOT.jar"]
```

GitHubRepository




https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Home:
Services
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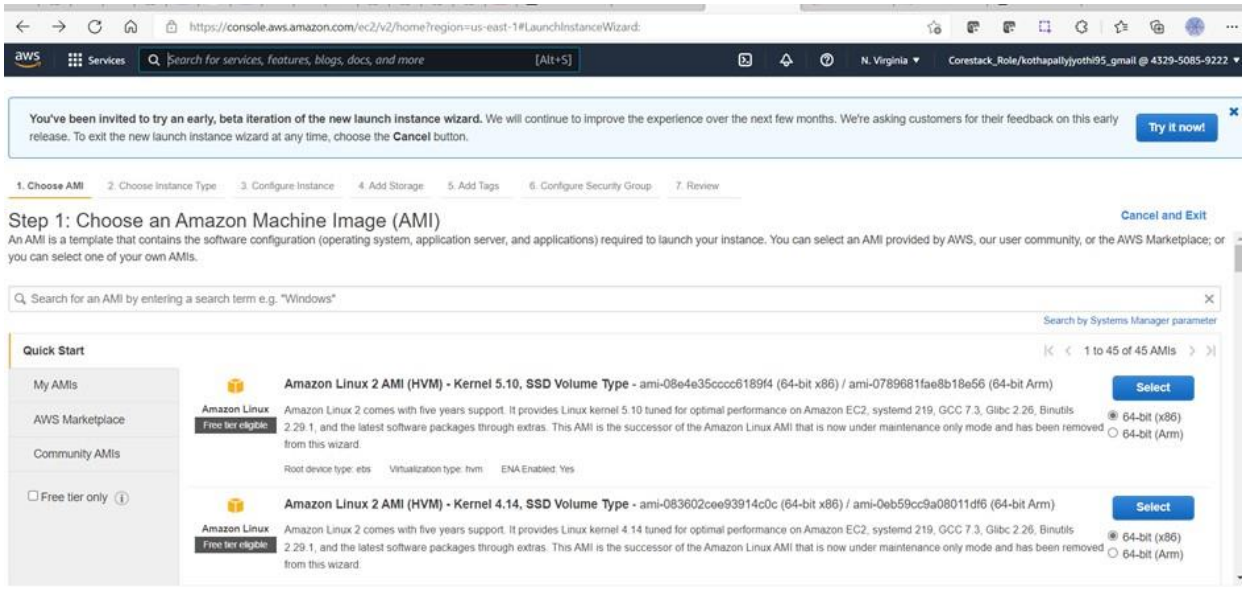
N. Virginia
Corestack_Role/kothapallyjyothi95_gmail @ 4329-5085-9222
New EC2 Experience
Tell us what you think
EC2 Dashboard
EC2 Global View
Events
Tags
Limits
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Scheduled Instances
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Resources
EC2 Global view
You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:
Instances (running) 2
Dedicated Hosts 0
Elastic IPs 0
Instances 2
Key pairs 1
Load balancers 0
Placement groups 0
Security groups 3
Snapshots 0
Volumes 2
Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. Learn more
Launch instance
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.
Launch instance
Migrate a server
Service health
AWS Health Dashboard
Region
US East (N. Virginia)
Status
This service is operating normally
Account attributes
Supported platforms
• VPC
Default VPC
vpc-04bd3690b978c140b
Settings
EBS encryption
Zones
EC2 Serial Console
Default credit specification
Console experiments
Explore AWS
Save up to 90% on EC2 with Spot Instances
Optimize price-performance by combining EC2 purchase options in a single EC2 ASG. Learn more
Run Containerized Workloads For Less
Deploy containerized workloads and manage clusters at up to 90% off with Amazon EC2 Spot


https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
Services
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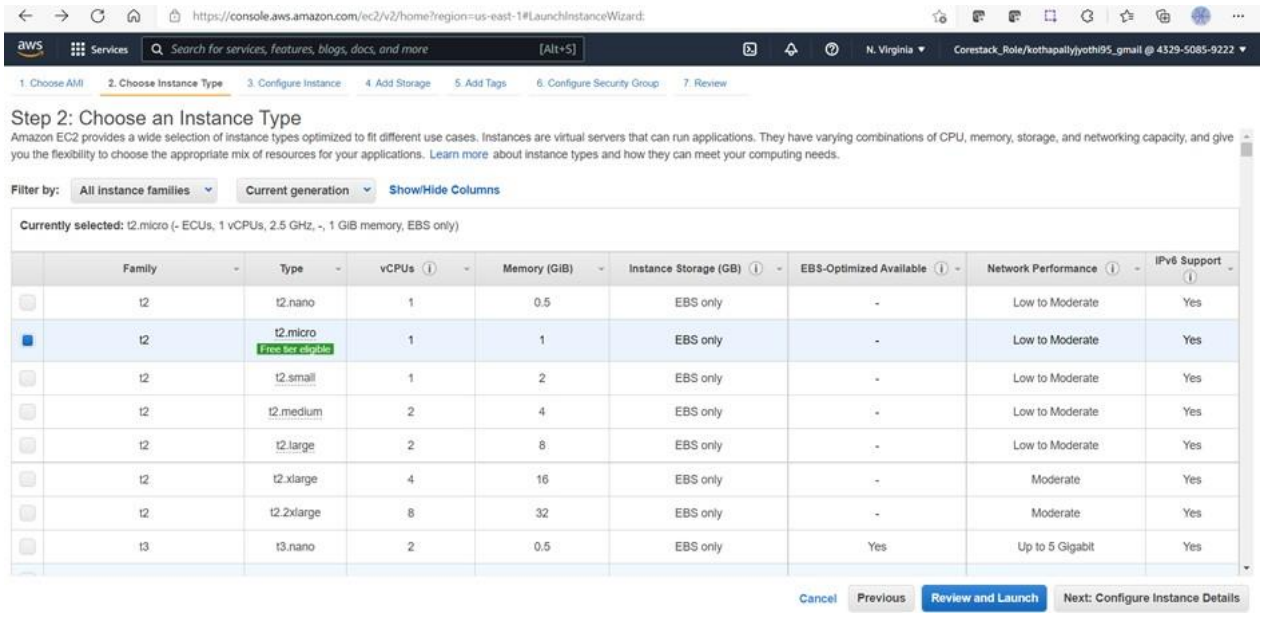
N. Virginia
Corestack_Role/kothapallyjyothi95_gmail @ 4329-5085-9222
You've been invited to try an early, beta iteration of the new launch instance wizard. We will continue to improve the experience over the next few months. We're asking customers for their feedback on this early release. To exit the new launch instance wizard at any time, choose the Cancel button.
Try it now!
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 1: Choose an Amazon Machine Image (AMI)
Cancel and Exit
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.
Search for an AMI by entering a search term e.g. "Windows"
Search by Systems Manager parameter
Quick Start
1 to 45 of 45 AMIs
My AMIs
AWS Marketplace
Community AMIs
Free tier only
Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type - ami-08e4e35cccc6189f4 (64-bit x86) / ami-0789681fae8b18e56 (64-bit Arm)
Amazon Linux
Free tier eligible
Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.
Root device type: ebs
Virtualization type: hvm
ENA Enabled: Yes
Select
64-bit (x86)
64-bit (Arm)
Amazon Linux 2 AMI (HVM) - Kernel 4.14, SSD Volume Type - ami-083602cee93914c0c (64-bit x86) / ami-0eb59cc9a08011df6 (64-bit Arm)
Amazon Linux
Free tier eligible
Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.
Select
64-bit (x86)
64-bit (Arm)


https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
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Services
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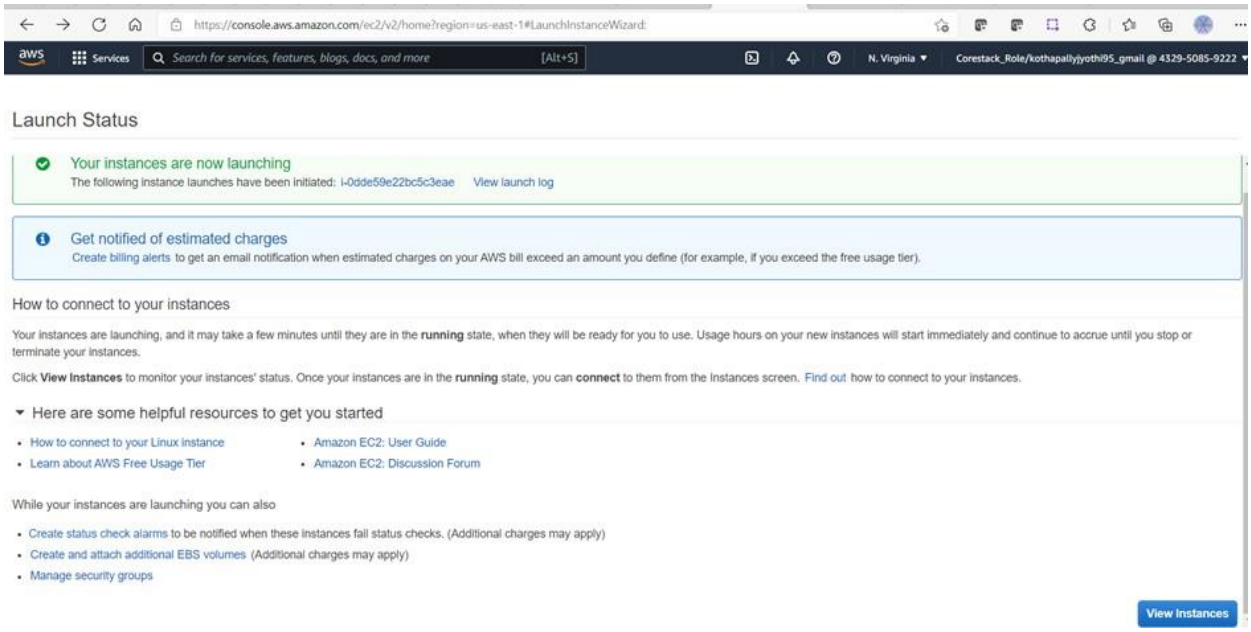
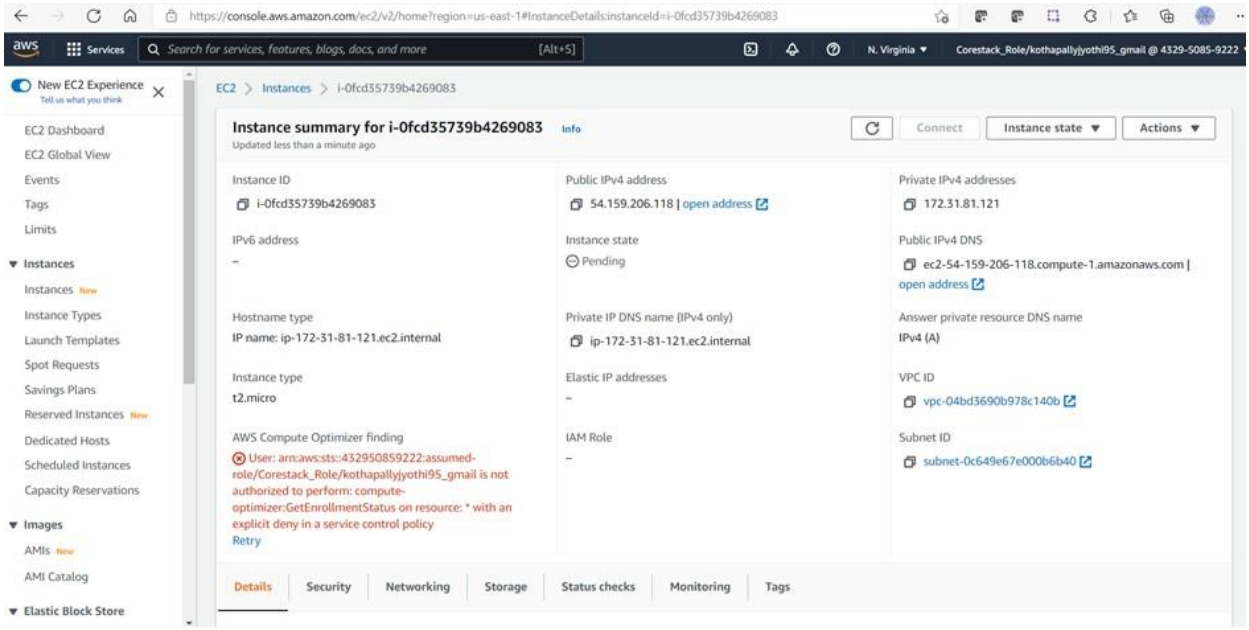
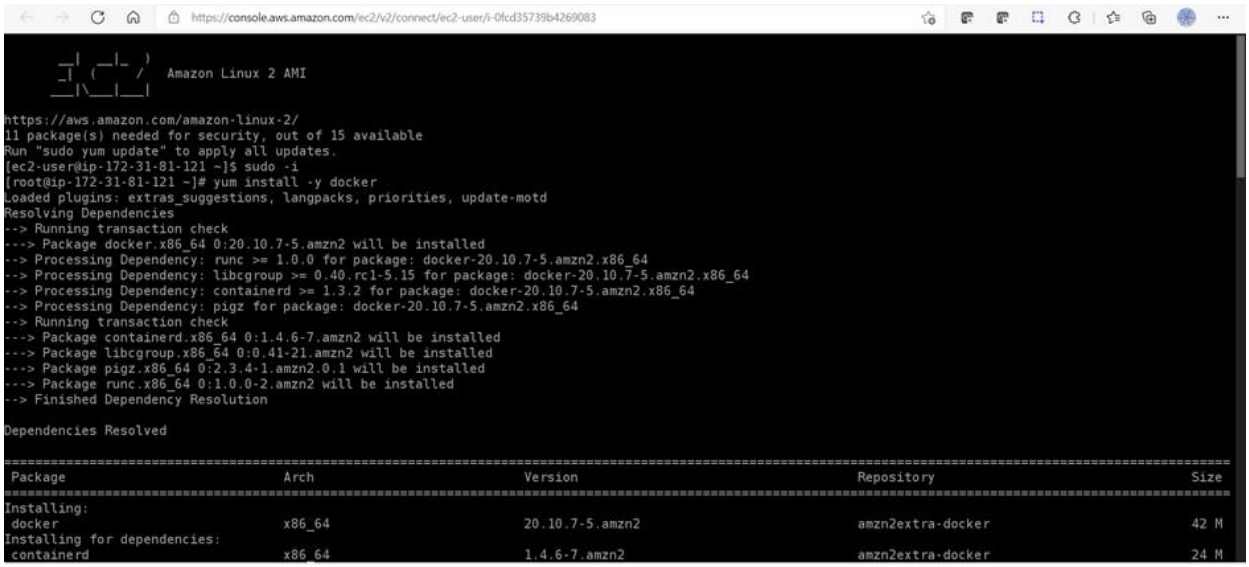
N. Virginia
Corestack_Role/kothapallyjyothi95_gmail @ 4329-5085-9222
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 2: Choose an Instance Type
Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. Learn more about instance types and how they can meet your computing needs.
Filter by:
All instance families
Current generation
Show/Hide Columns
Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)
Family
Type
vCPUs
Memory (GiB)
Instance Storage (GB)
EBS-Optimized Available
Network Performance
IPv6 Support
t2 t2.nano 1 0.5 EBS only - Low to Moderate Yes
t2 t2.micro Free tier eligible 1 1 EBS only - Low to Moderate Yes
t2 t2.small 1 2 EBS only - Low to Moderate Yes
t2 t2.medium 2 4 EBS only - Low to Moderate Yes
t2 t2.large 2 8 EBS only - Low to Moderate Yes
t2 t2.xlarge 4 16 EBS only - Moderate Yes
t2 t2.2xlarge 8 32 EBS only - Moderate Yes
t3 t3.nano 2 0.5 EBS only Yes Up to 5 Gigabit Yes
Cancel
Previous
Review and Launch
Next: Configure Instance Details

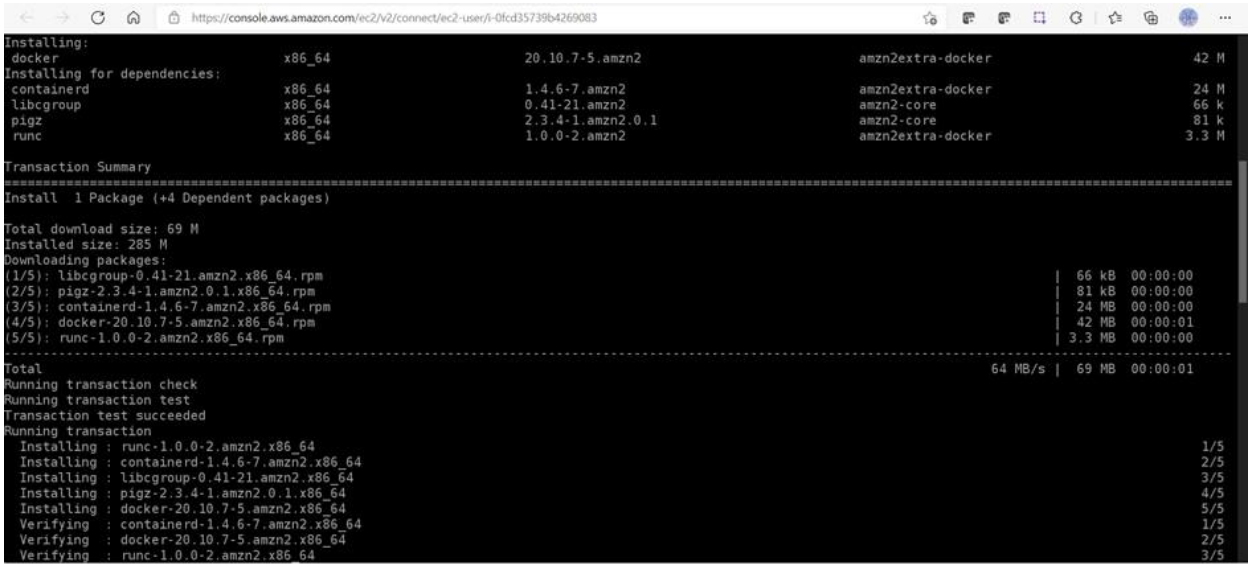

https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
aws
Services
Search for services, features, blogs, docs, and more [Alt+S]
N. Virginia
Corestack_Role/kothapallyjyothi95_gmail @ 4329-5085-9222
Launch Status
Your instances are now launching
The following instance launches have been initiated: i-0dde59e22bc5c3eae View launch log
Get notified of estimated charges
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).
How to connect to your instances
Your instances are launching, and it may take a few minutes until they are in the running state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.
Click View Instances to monitor your instances' status. Once your instances are in the running state, you can connect to them from the Instances screen. Find out how to connect to your instances.
Here are some helpful resources to get you started
How to connect to your Linux instance
Learn about AWS Free Usage Tier
Amazon EC2: User Guide
Amazon EC2: Discussion Forum
While your instances are launching you can also
Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply)
Create and attach additional EBS volumes (Additional charges may apply)
Manage security groups
View Instances





i-0fcd35739b4269083

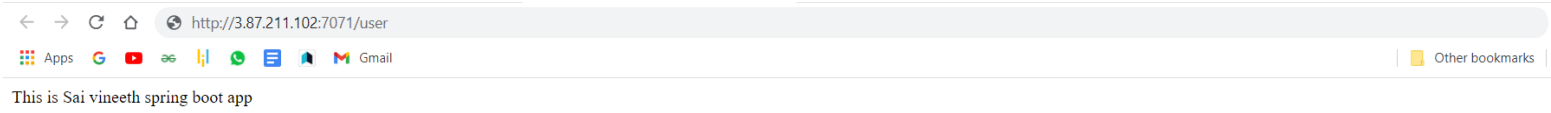
Public IPs: 54.159.206.118 Private IPs: 172.31.81.121



i-0fcd35739b4269083

Public IPs: 54.159.206.118 Private IPs: 172.31.81.121

Output:



This is Sai vineeth spring boot app