

Trendstore

GitHub Link : <https://github.com/Vennilavan12/Trend.git>

Overview

React application deployment to a production-ready state.

Brief description of the application, its purpose, and key features.

Example:

This project showcases deploying a React application from code to a production-ready, containerized application on Kubernetes (Amazon EKS) using a CI/CD pipeline with AWS CodeBuild, CodePipeline.

Architecture Overview

- Application: React
- Containerization: Docker
- Orchestration: Kubernetes (Amazon EKS)
- CI/CD Pipeline: Jenkins
- Cloud Provider: AWS
- Monitoring & Observability: Prometheus and Grafana dashboards

Setup Instructions

Prerequisites

- Docker
- kubectl
- AWS CLI
- eksctl
- kubectl

CI/CD Pipeline Explanation

Pipeline Stages

1. Pipeline Stages
2. Code Checkout
3. Push Docker Image to Docker Hub
4. Deploy to Kubernetes

Pipeline Flow

- On code push to the Git repository, Jenkins automatically triggers the build via webhooks.
- The Docker image is built and pushed to Docker Hub.
- Kubernetes manifests are automatically applied to deploy the application.

Project Screenshots and Proof of Implementation

This section includes screenshots that provide visual proof of the successful implementation and execution of the project. The screenshots demonstrate key stages and components of the deployment, including:

- ❖ Source code repositories and project structure
- ❖ Successful Docker image build and push to Docker Hub
- ❖ Jenkins CI/CD pipeline execution (checkout, build, push, and deploy stages)
- ❖ Amazon EKS cluster creation and running status
- ❖ Kubernetes deployments and services running successfully
- ❖ Application accessibility via the exposed application URL

- ❖ Prometheus metrics collection and Grafana dashboards displaying real-time cluster and application health

These screenshots collectively validate the end-to-end workflow, from source code to a production-ready, containerized application deployed on Kubernetes.

GIT URL : Project files

The full project setup and configuration artifacts are version-controlled and available in the Git repository.

URL :

https://github.com/udhayakumarethiraj1/enterprise/tree/a03c4c416cbb50ea36980bd640562255cff3e0fc/Project_2_Trend_store

Trendstore.git (Private): Contains all supporting configuration and infrastructure files, including the Dockerfile, Jenkinsfile, Kubernetes manifests (deployment.yaml, service.yaml, node-exporter-lb.yaml, kube-state-metrics-lb.yaml), .gitignore, and Terraform files.

URL : <https://github.com/udhayakumarethiraj-git/Trendstore.git>

Stage : Application

Git Repo Cloned to my repo (Trend)

https://github.com/udhayakumarethiraj-git/project_2_trend_store.git

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ git clone https://github.com/Vennilavan12/Trend.git
Cloning into 'Trend'...
remote: Enumerating objects: 77, done.
remote: Counting objects: 100% (2/2), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 77 (delta 0), reused 0 (delta 0), pack-reused 75 (from 1)
Receiving objects: 100% (77/77), 8.58 MiB | 14.95 MiB/s, done.
Resolving deltas: 100% (1/1), done.
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ ll
total 12
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 20 05:54 ./
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 20 05:54 ../
drwxrwxr-x 4 ubuntu ubuntu 4096 Jan 20 05:54 Trend/
```

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ git remote set-url origin git@github.com:udhayakumarethiraj-git/Trendstore.git
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ git push origin main
Enumerating objects: 77, done.
Counting objects: 100% (77/77), done.
Delta compression using up to 2 threads
Compressing objects: 100% (76/76), done.
Writing objects: 100% (77/77), 8.58 MiB | 2.33 MiB/s, done.
Total 77 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To github.com:udhayakumarethiraj-git/Trendstore.git
 * [new branch]      main -> main
```

The screenshot shows the GitHub web interface for a repository named 'Trendstore' by user 'udhayakumarethiraj-git'. The repository is public and has 1 branch (main) and 0 tags. The main branch is selected, showing a commit 'Ubuntu repo cloned' from 23 minutes ago. The repository contains a file named 'dist'. The README section is currently empty, with a prompt to 'Add a README'. The right sidebar shows the repository's activity, including 0 stars, 0 watching, and 0 forks. There are no releases or packages published yet.

Stage : Docker

Containerize the application by creating a Dockerfile, building the image, and testing the output.

Dockerfile

```
FROM nginx:alpine

# Remove default nginx static files
RUN rm -rf /usr/share/nginx/html/*

# Copy Vite build output to nginx
COPY dist /usr/share/nginx/html

# Expose port 80
EXPOSE 80

CMD ["nginx", "-g", "daemon off;"]
```

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ more Dockerfile
FROM nginx:alpine

# Remove default nginx static files
RUN rm -rf /usr/share/nginx/html/*

# Copy Vite build output to nginx
COPY dist /usr/share/nginx/html

# Expose port 80
EXPOSE 80

CMD ["nginx", "-g", "daemon off;"]
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$
```

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ vi Dockerfile
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker build -t trendstore:latest .
[+] Building 2.9s (8/8) FINISHED
-> [internal] load build definition from Dockerfile
-> => transferring dockerfile: 260B
-> [internal] load metadata for docker.io/library/nginx:alpine
-> [internal] load .dockerignore
-> => transferring context: 2B
-> [1/3] FROM docker.io/library/nginx:alpine@sha256:b0f7830b6bfaa1258f45d94c240ab668ced1b3651c8a222aefe6683447c7bf55
-> => resolve docker.io/library/nginx:alpine@sha256:b0f7830b6bfaa1258f45d94c240ab668ced1b3651c8a222aefe6683447c7bf55
-> [internal] load build context
-> => transferring context: 9.24MB
-> CACHED [2/3] RUN rm -rf /usr/share/nginx/html/*
-> [3/3] COPY dist /usr/share/nginx/html
-> exporting to image
-> => exporting layers
-> => exporting manifest sha256:3903c98e8483d64f6ff186eba40d68333737a1392d2a83a8949da88fe12bb2b6
-> => exporting config sha256:0fceb60cedaf899115369c9eaaefb9c2f61d17f7dd640ea65486708e014d1a0
-> => exporting attestation manifest sha256:f6b0959dd0b966b42c028d72dea9435015b013124a2b0e576f78af0855f7d565
-> => exporting manifest list sha256:bbb94072eab1136beb17f31ce308b910652626e0448a840949fb81fc5e67eb2e
-> => naming to docker.io/library/trendstore:latest
-> => unpacking to docker.io/library/trendstore:latest
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker images
```

| IMAGE | ID | DISK USAGE | CONTENT SIZE | EXTRA | In Use |
|---|--------------|------------|--------------|-------|--------|
| 758234806674.dkr.ecr.ap-south-1.amazonaws.com/brain_task_project:latest | 6fc15216dbed | 92.7MB | 26MB | | |
| brain-task:latest | a4e360937599 | 92.7MB | 26MB | | |
| trendstore:latest | bbb94072eab1 | 111MB | 34.9MB | | |

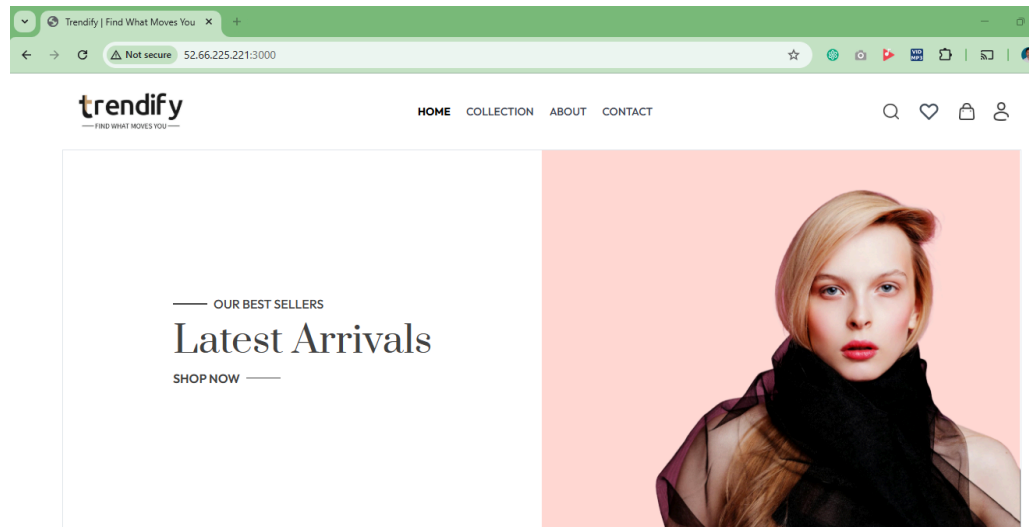
```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker run -d -p 3000:80 trendstore:latest
cd33d7889d44432c60bee67847b54b08981cdba7553d38784c4fee300b53df53
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ more Dockerfile
```

```

ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
AMBS          cd33d7889d44   trendstore:latest       "/docker-entrypoint..."  4 minutes ago  Up 4 minutes   0.0.0.0:3000->80/tcp, [::]:3000->80/tcp
ostalgic_fermi
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$

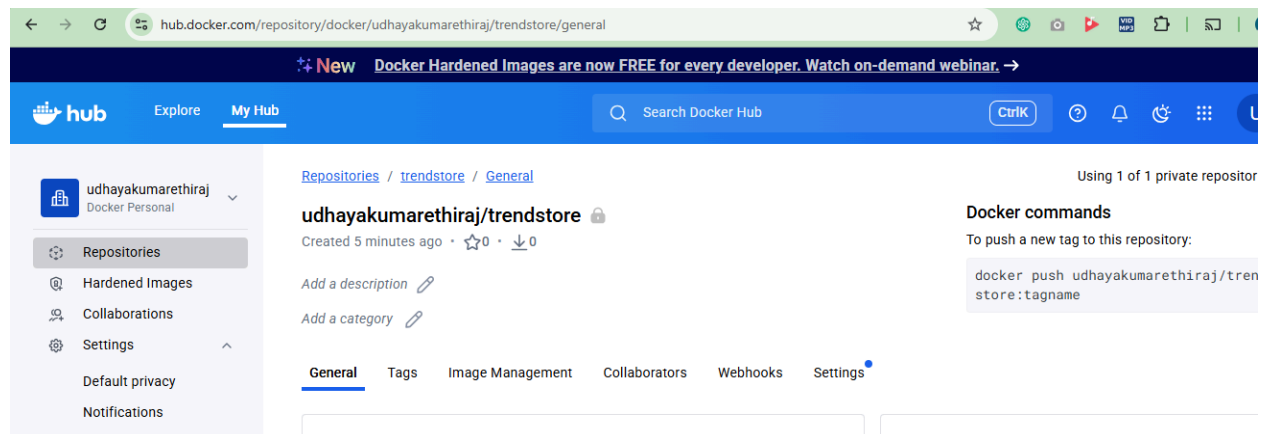
```

Output Test result



Stage : DockerHUB

Docker Hub repo created



```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker login -u udhayakumarethiraj

Info → A Personal Access Token (PAT) can be used instead.
To create a PAT, visit https://app.docker.com/settings

Password:

WARNING! Your credentials are stored unencrypted in '/home/ubuntu/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/

Login Succeeded
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$
```

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker tag trendstore:latest udhayakumarethiraj/trendstore:latest
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker push udhayakumarethiraj/trendstore:latest
The push refers to repository [docker.io/udhayakumarethiraj/trendstore]
da7c973d8b92: Pushed
33f95a0f3229: Pushed
085c5e5aaa8e: Pushed
f5aa8e0adca0: Pushed
567f84da6fbd: Pushed
0abf9e567266: Pushed
25f453064fd3: Pushed
d1081cf8f0ea: Pushed
1074353eec0d: Pushed
e096540205d5: Pushed
f56ea78a1a5f: Pushed
latest: digest: sha256:bbb94072eab1136beb17f31ce308b910652626e0448a840949fb81fc5e67eb2e size: 856
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ docker images
```

| IMAGE | ID | DISK USAGE | CONTENT SIZE | EXTRA | In Use |
|---|--------------|------------|--------------|-------|--------|
| 758234806674.dkr.ecr.ap-south-1.amazonaws.com/brain_task_project:latest | 6fc15216dbed | 92.7MB | 2.6MB | U | |
| brain-task:latest | a4e360937599 | 92.7MB | 2.6MB | U | |
| trendstore:latest | bbb94072eab1 | 111MB | 34.9MB | U | |
| udhayakumarethiraj/trendstore:latest | bbb94072eab1 | 111MB | 34.9MB | U | |

Docker image pushed to Docker hub

hub.docker.com/repository/docker/udhayakumarethiraj/trendstore/general

New Docker Hardened Images are now FREE for every developer. Watch on

hub Explore My Hub Search Docker Hub

Repositories / trendstore / General

udhayakumarethiraj/trendstore

Last pushed 1 minute ago • Repository size: 33.3 MB • ☆ 0 • ↓ 0

Add a description

Add a category

General Tags Image Management Collaborators Webhooks Settings

Tags DOCKER SCOUT INACTIVE [Activate](#)

This repository contains 0 tag(s).

| Tag | OS | Type | Pulled | Pushed |
|--------|----|-------|-----------------|----------|
| latest | | Image | less than 1 day | 1 minute |

[See all](#)

Stage : Terraform

Using Terraform VPC, IAM, EC2 created with Jenkins and EKS deployed

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo/Terraform$ ll
total 28
drwxrwxr-x 2 ubuntu ubuntu 4096 Jan 27 08:23 ./
drwxrwxr-x 5 ubuntu ubuntu 4096 Jan 27 07:04 ../
-rw-rw-r-- 1 ubuntu ubuntu 1429 Jan 27 08:22 ec2.tf
-rw-rw-r-- 1 ubuntu ubuntu  996 Jan 27 08:22 eks.tf
-rw-rw-r-- 1 ubuntu ubuntu 1036 Jan 27 08:22 iam_user.tf
-rw-rw-r-- 1 ubuntu ubuntu 1843 Jan 27 08:22 user_data.sh
-rw-rw-r-- 1 ubuntu ubuntu 1564 Jan 27 08:22 vpc.tf
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo/Terraform$
```

VPC

```
ubuntu@ip-172-31-28-193: ~/projects/trend/trend-repo/Terraform/envs/trendstore
+ from_port      = 22
+ ipv6_cidr_blocks = []
+ prefix_list_ids = []
+ protocol       = "tcp"
+ security_groups = []
+ self           = false
+ to_port        = 22
# (1 unchanged attribute hidden)
},
]
+ name           = "trendstore-trendstore-ec2-sg"
+ name_prefix    = (known after apply)
+ owner_id       = (known after apply)
+ region         = "ap-south-1"
+ revoke_rules_on_delete = false
+ tags           = {
+   "Environment" = "trendstore"
+   "Name"        = "trendstore-trendstore-ec2-sg"
+   "Project"     = "trendstore"
+ }
+ tags_all       = {
+   "Environment" = "trendstore"
+   "Name"        = "trendstore-trendstore-ec2-sg"
+   "Project"     = "trendstore"
+ }
+ vpc_id         = "vpc-0366bf05cb6382061"
}

Plan: 2 to add, 0 to change, 0 to destroy.
module.ec2.aws_security_group.ec2_sg: Creating...
module.ec2.aws_security_group.ec2_sg: Creation complete after 2s [id=sg-0e5905d82ab83aef3]
module.ec2.aws_instance.this: Creating...
module.ec2.aws_instance.this: Still creating... [00m10s elapsed]
module.ec2.aws_instance.this: Creation complete after 12s [id=i-0be80b957a19a3e4e]
Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
```


aws [Search] [Alt+S] Asia Pacific (Mumbai) udhayakumarethiraj [7]

VPC > Your VPCs > vpc-0366bf05cb6382061

VPC dashboard <

AWS Global View [↗](#)

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Your VPCs

- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists

vpc-0366bf05cb6382061 / trendstore-trendstore-vpc

Details [Info](#)

| | | | |
|--|--|--|--|
| VPC ID vpc-0366bf05cb6382061 | State Available | Block Public Access Off | DNS hostnames Enabled |
| DNS resolution Enabled | Tenancy default | DHCP option set dopt-0beef96a379412ee8 | Main route table rtb-0cebf44cb929d795b trendstore-trendstore-vp |
| Main network ACL acl-081f4a34834da5e9b / trendstore-trendstore-vpc-default | Default VPC No | IPv4 CIDR 10.0.0.0/16 | IPv6 pool - |
| IPv6 CIDR (Network border group) - | Network Address Usage metrics Disabled | Route 53 Resolver DNS Firewall rule groups - | Owner ID 758234806674 |
| Encryption control ID - | Encryption control mode - | | |

IAM

aws [Search] [Alt+S] Global

IAM > Users > user_trendstore

Identity and Access Management (IAM) <

Search IAM

Dashboard

▼ Access Management

- User groups
- Users**
- Roles
- Policies
- Identity providers
- Account settings
- Root access management
- Temporary delegation requests

New

▼ Access reports

- Access Analyzer
- Resource analysis [New](#)
- Unused access
- Analyzer settings

user_trendstore [Info](#)

Summary

| | | |
|--|-----------------------------------|--|
| ARN arn:aws:iam::758234806674:user/user_trendstore | Console access Disabled | Access key 1 Create access key |
| Created January 20, 2026, 15:35 (UTC+05:30) | Last console sign-in - | |

[Permissions](#) [Groups](#) [Tags \(3\)](#) [Security credentials](#) [Last Accessed](#)

Permissions policies (3)

Permissions are defined by policies attached to the user directly or through groups.

Search [Filter by Type](#) ▾

| <input type="checkbox"/> | Policy name | Type | Attached via |
|--------------------------|-------------------------------------|----------------------------|------------------------------|
| <input type="checkbox"/> | AdministratorAccess | AWS managed - job function | Directly |
| <input type="checkbox"/> | Billing | AWS managed - job function | Directly |
| <input type="checkbox"/> | IAMFullAccess | AWS managed | Directly |

[Remove](#)

EC2 Instance

aws Search [Alt+S] Asia Pacific (Mumbai) udhayakumarethiraj (7582-34)

EC2 > Instances > i-0be80b957a19a3e4e

EC2

- Dashboard
- AWS Global View
- Events
- ▼ Instances
 - Instances
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations
 - Capacity Manager [New](#)
- ▼ Images

Instance summary for i-0be80b957a19a3e4e (trendstore-trendstore-ec2) [Info](#)

Updated less than a minute ago

[Connect](#) [Instance state](#) [Actions](#)

| | | |
|---|---|--|
| Instance ID i-0be80b957a19a3e4e | Public IPv4 address 3.6.91.230 open address | Private IPv4 addresses 10.0.101.40 |
| IPv6 address - | Instance state Running | Public DNS ec2-3-6-91-230.ap-south-1.compute.amazonaws.com open address |
| Hostname type IP name: ip-10-0-101-40.ap-south-1.compute.internal | Private IP DNS name (IPv4 only) ip-10-0-101-40.ap-south-1.compute.internal | Elastic IP addresses - |
| Answer private resource DNS name - | Instance type t3.small | AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more |
| Auto-assigned IP address 3.6.91.230 [Public IP] | VPC ID vpc-0366bf05cb6382061 (trendstore-trendstore-vpc) open address | |

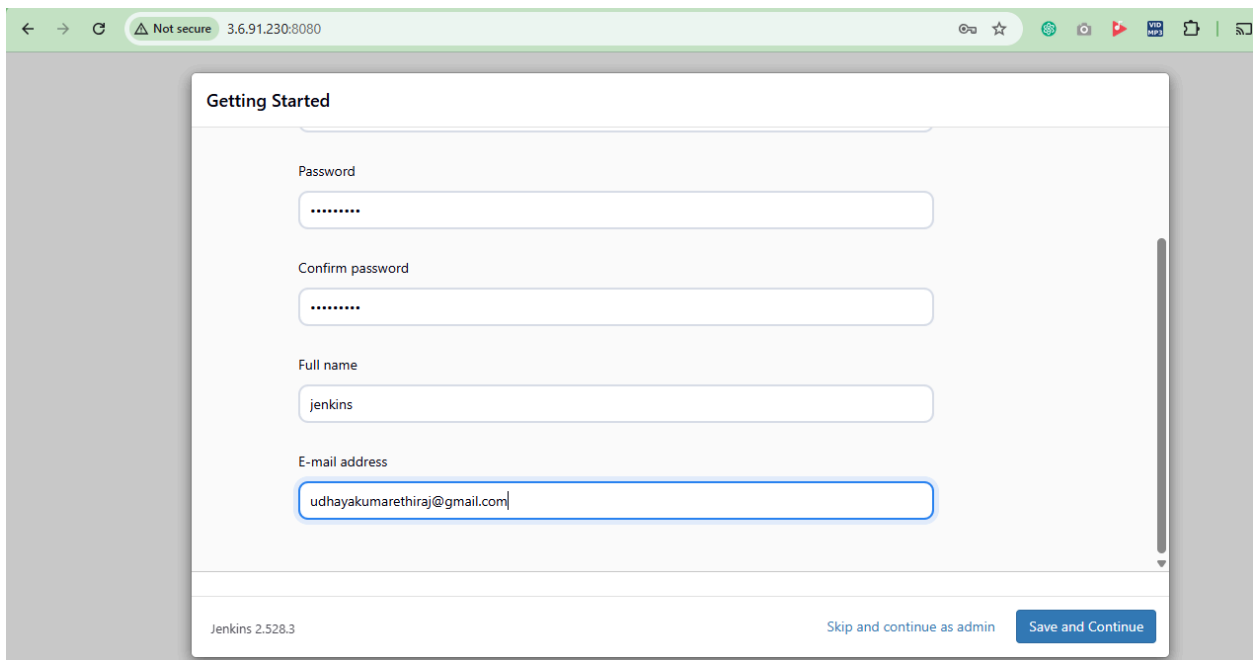
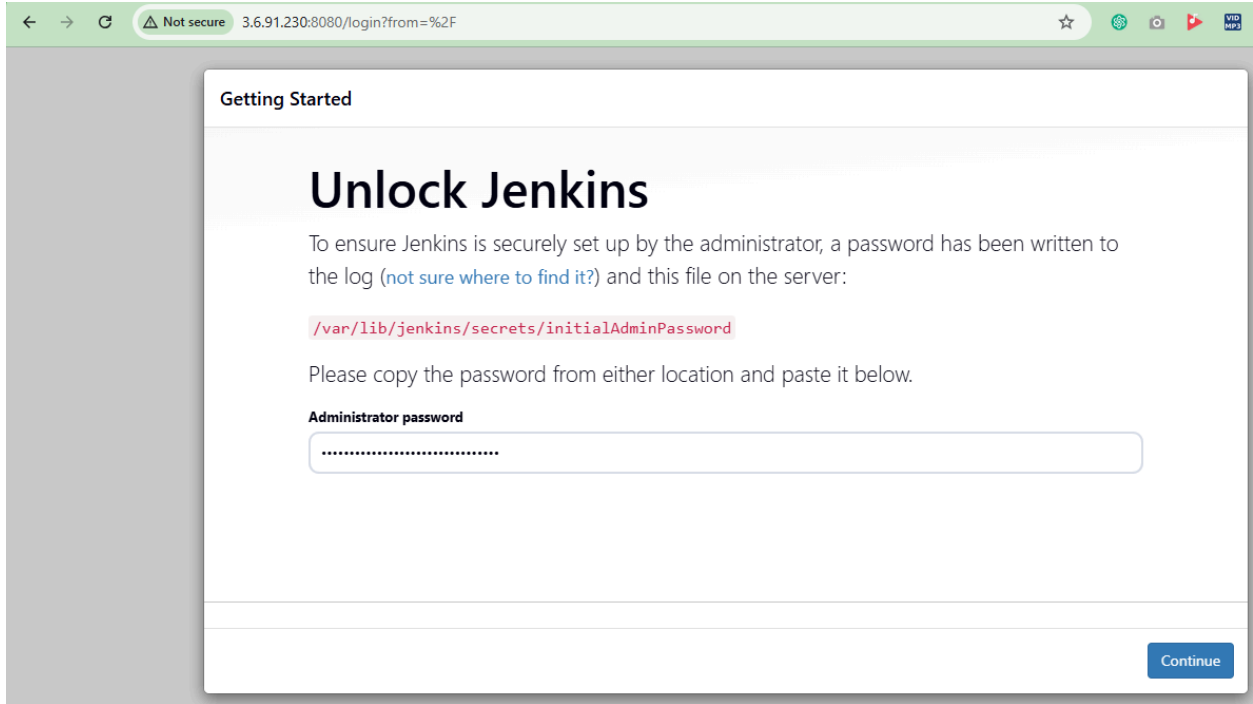
Installed packages

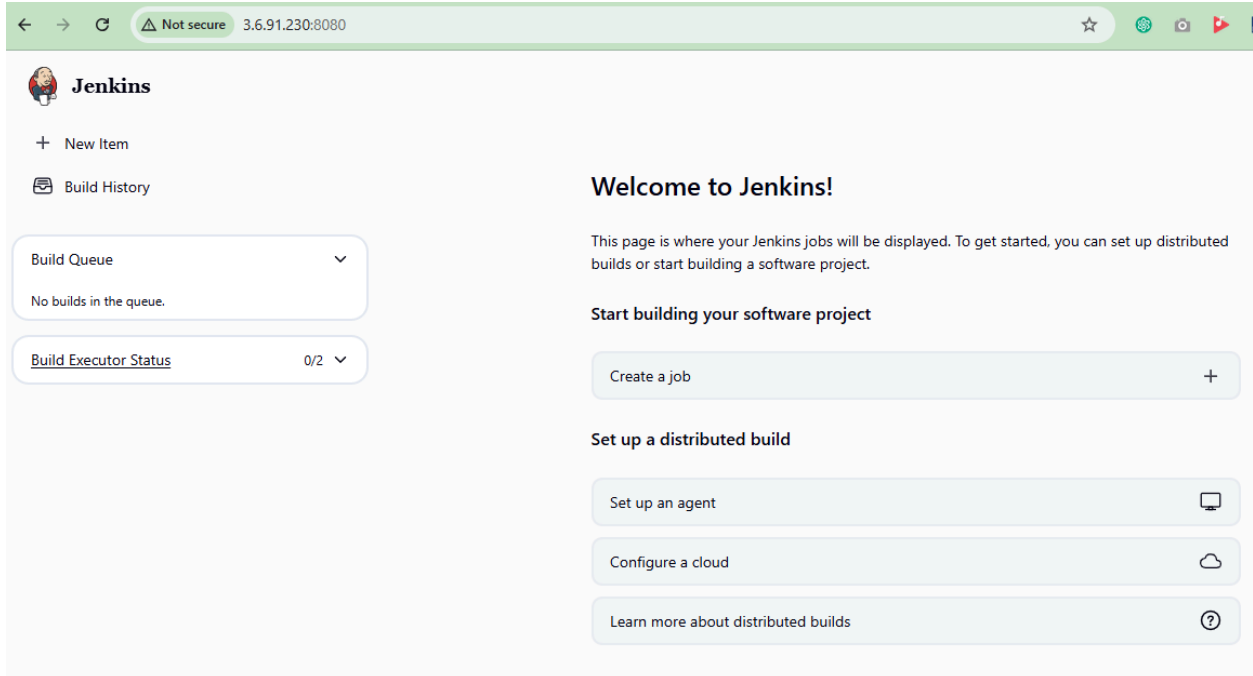
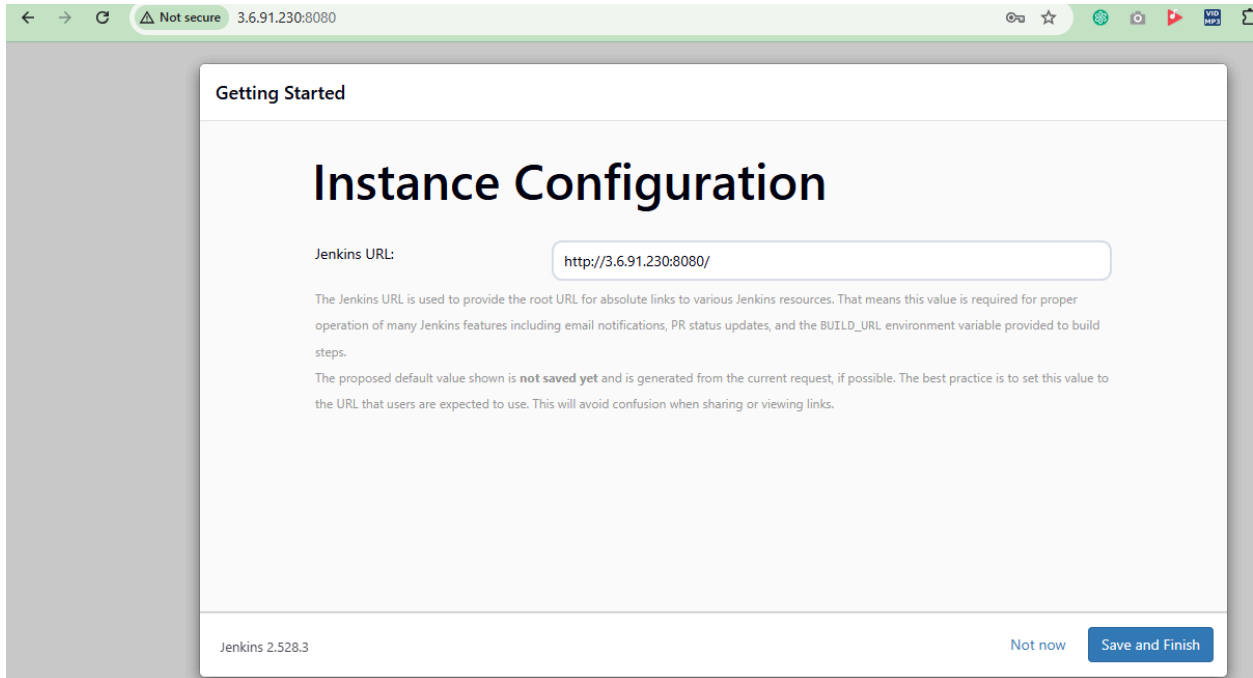
aws Search [Alt+S] Ask Amazon Q Asia Pacific (Mumbai)

```

ubuntu@ip-10-0-101-40:~$ docker --version
Docker version 29.1.5, build 0e6fee6
ubuntu@ip-10-0-101-40:~$ git --version
git version 2.34.1
ubuntu@ip-10-0-101-40:~$ aws --version
aws-cli/2.33.2 Python/3.13.11 Linux/6.8.0-1044-aws exe/x86_64.ubuntu.22
ubuntu@ip-10-0-101-40:~$ eksctl version
0.221.0
ubuntu@ip-10-0-101-40:~$ jenkins --version
2.528.3
ubuntu@ip-10-0-101-40:~$ kubectl version
Client Version: v1.35.0
Kustomize Version: v5.7.1
Error from server (Forbidden): <html><head><meta http-equiv='refresh' content='1;url=/login?from=%2Fversion%3Ftimeout%3D30&ta-redirect-url=/login?from=%2Fversion%3Ftimeout%3D30&src=/static/9194c520/scripts/redirect.js'></script></head><body><div>Authentication required</div></body></html>
ubuntu@ip-10-0-101-40:~$
  
```

Jenkins installed





Stage : Kubernetes

EKS Kubernetes cluster created using Terraform

```

ubuntu@ip-172-31-28-193: ~/projects/eks_test
module.eks.aws_eks_addon.before_compute["vpc-cni"]: Creation complete after 14s [id=my-cluster:vpc-cni]
module.eks.time_sleep.this[0]: Still creating... [20s elapsed]
module.eks.aws_eks_addon.before_compute["eks-pod-identity-agent"]: Still creating... [20s elapsed]
module.eks.aws_eks_addon.before_compute["eks-pod-identity-agent"]: Creation complete after 24s [id=my-cluster:eks-pod-identity-agent]
module.eks.time_sleep.this[0]: Still creating... [30s elapsed]
module.eks.time_sleep.this[0]: Creation complete after 30s [id=2026-01-23T06:41:07Z]
module.eks.module.eks_managed_node_group["default"].module.user_data.null_resource.validate_cluster_service_cidr: Creating...
module.eks.module.eks_managed_node_group["default"].module.user_data.null_resource.validate_cluster_service_cidr: Creation complete after 0s [id=818369290281045381]
module.eks.module.eks_managed_node_group["default"].aws_launch_template.this[0]: Creating...
module.eks.module.eks_managed_node_group["default"].aws_launch_template.this[0]: Creation complete after 6s [id=lt-097e77f2b21f536e]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Creating...
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [10s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [20s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [30s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [40s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [50s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [1m0s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [1m10s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [1m20s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [1m30s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Still creating... [1m40s elapsed]
module.eks.module.eks_managed_node_group["default"].aws_eks_node_group.this[0]: Creation complete after 1m48s [id=my-cluster:default]
026012306411275010000000d]
module.eks.aws_eks_addon.this["coredns"]: Creating...
module.eks.aws_eks_addon.this["kube-proxy"]: Creating...
module.eks.aws_eks_addon.this["coredns"]: Still creating... [10s elapsed]
module.eks.aws_eks_addon.this["kube-proxy"]: Still creating... [10s elapsed]
module.eks.aws_eks_addon.this["coredns"]: Creation complete after 14s [id=my-cluster:coredns]
module.eks.aws_eks_addon.this["kube-proxy"]: Still creating... [20s elapsed]
module.eks.aws_eks_addon.this["kube-proxy"]: Creation complete after 24s [id=my-cluster:kube-proxy]

Apply complete! Resources: 59 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-28-193:~/projects/eks_test$ eksctl get cluster
NAME          REGION    EKSCTL_CREATED
my-cluster    ap-south-1  False

```

Kubernetes Cluster details

Kubernetes Node details

Kubernetes Pod details

```

ubuntu@ip-172-31-28-193: ~/projects/trend/trend-repo
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ eksctl get cluster
NAME          REGION    EKSCTL_CREATED
my-cluster    ap-south-1  False
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ kubectl get nodes
NAME                                STATUS    ROLES    AGE    VERSION
ip-10-0-0-71.ap-south-1.compute.internal Ready    <none>    34m    v1.32.9-eks-ecaa3a6
ip-10-0-2-35.ap-south-1.compute.internal Ready    <none>    34m    v1.32.9-eks-ecaa3a6
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ kubectl get pods
NAME                                READY    STATUS    RESTARTS    AGE
trendstore-6dcf4bb887-fzcpt        1/1      Running    0            5m31s
trendstore-6dcf4bb887-jdjgm        1/1      Running    0            5m31s
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ kubectl get pods -A
NAMESPACE   NAME                                READY    STATUS    RESTARTS    AGE
default     trendstore-6dcf4bb887-fzcpt        1/1      Running    0            5m36s
default     trendstore-6dcf4bb887-jdjgm        1/1      Running    0            5m36s
kube-system aws-node-86m9l                    2/2      Running    0            34m
kube-system aws-node-sbjv9                  2/2      Running    0            34m
kube-system coredns-6f9885fdb6-6sc4q        1/1      Running    0            33m
kube-system coredns-6f9885fdb6-bztf5        1/1      Running    0            33m
kube-system eks-pod-identity-agent-5z6xh  1/1      Running    0            34m
kube-system eks-pod-identity-agent-9ddpl  1/1      Running    0            34m
kube-system kube-proxy-stx2p            1/1      Running    0            33m
kube-system kube-proxy-z9w9c            1/1      Running    0            33m

```

```

ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ ll
total 36
drwxrwxr-x 5 ubuntu ubuntu 4096 Jan 23 07:10 ./
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 21 08:51 ../
drwxrwxr-x 8 ubuntu ubuntu 4096 Jan 20 16:13 .git/
-rw-rw-r-- 1 ubuntu ubuntu 216 Jan 20 10:43 .gitignore
-rw-rw-r-- 1 ubuntu ubuntu 221 Jan 20 06:23 Dockerfile
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 23 07:14 Terraform/
-rw-rw-r-- 1 ubuntu ubuntu 481 Jan 23 07:07 deployment.yaml
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 20 05:54 dist/
-rw-rw-r-- 1 ubuntu ubuntu 417 Jan 23 07:10 service.yaml
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ █

```

```

ubuntu@ip-172-31-28-193: ~/projects/trend/trend-repo
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ ll
total 36
drwxrwxr-x 5 ubuntu ubuntu 4096 Jan 23 07:10 ./
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 21 08:51 ../
drwxrwxr-x 8 ubuntu ubuntu 4096 Jan 20 16:13 .git/
-rw-rw-r-- 1 ubuntu ubuntu 216 Jan 20 10:43 .gitignore
-rw-rw-r-- 1 ubuntu ubuntu 221 Jan 20 06:23 Dockerfile
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 23 07:14 Terraform/
-rw-rw-r-- 1 ubuntu ubuntu 481 Jan 23 07:07 deployment.yaml
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 20 05:54 dist/
-rw-rw-r-- 1 ubuntu ubuntu 417 Jan 23 07:10 service.yaml
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ kubectl get svc

```

| NAME | AGE | TYPE | CLUSTER-IP | EXTERNAL-IP | PORT(S) |
|------------|-------------|--------------|---------------|--|-----------|
| kubernetes | 38m | ClusterIP | 172.20.0.1 | <none> | 443/TCP |
| trendstore | 2/TCP 4m19s | LoadBalancer | 172.20.128.99 | a8392e2ba0a6844878839c8fa2307040-b2ec893399960f82.elb.ap-south-1.amazonaws.com | 3000:3115 |

```

ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ █

```

Kubernetes deployment

Kubernetes deployment and service created

Secrets added for Docker hub private image pull request

kubectl create secret generic dockerhub-secret

--from-file=.dockerconfigjson=\$HOME/.docker/config.json

--type=kubernetes.io/dockerconfigjson

```

ubuntu@ip-172-31-28-193:~/projects/eks_test$ kubectl create secret generic dockerhub-secret --from-file=.dockerconfigjson=$HOME/.docker/config.json --type=kubernetes.io/dockerconfigjson
secret/dockerhub-secret created
ubuntu@ip-172-31-28-193:~/projects/eks_test$ kubectl get secrets

```

| NAME | TYPE | DATA | AGE |
|------------------|--------------------------------|------|------|
| dockerhub-secret | kubernetes.io/dockerconfigjson | 1 | 3m1s |

```

ubuntu@ip-172-31-28-193:~/projects/eks_test$ █

```

Application deployed using Deployment.yaml & Service.yaml

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ more deployment.yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: trendstore
  labels:
    app: trendstore
spec:
  replicas: 2
  selector:
    matchLabels:
      app: trendstore
  template:
    metadata:
      labels:
        app: trendstore
    spec:
      imagePullSecrets:
        - name: dockerhub-secret
      containers:
        - name: trendstore
          image: udhayakumarethiraj/trendstore:latest
          imagePullPolicy: Always
          ports:
            - containerPort: 3000
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$
```

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ more service.yaml
apiVersion: v1
kind: Service
metadata:
  name: trendstore
  annotations:
    service.beta.kubernetes.io/aws-load-balancer-type: "classic"
    service.beta.kubernetes.io/aws-load-balancer-scheme: "internet-facing"
spec:
  type: LoadBalancer
  selector:
    app: trendstore
  ports:
    - port: 3000          # external port (what clients use)
      targetPort: 3000    # container port inside the pod (updated)
      protocol: TCP
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$
```

Stage : Jenkins

Jenkins setup

A Jenkinsfile created to define the CI/CD pipeline stages, including checkout, build, push, and deployment.

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ ll
total 40
drwxrwxr-x 5 ubuntu ubuntu 4096 Jan 23 10:00 ./
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 23 07:28 ../
drwxrwxr-x 8 ubuntu ubuntu 4096 Jan 23 10:01 .git/
-rw-rw-r-- 1 ubuntu ubuntu 216 Jan 20 10:43 .gitignore
-rw-rw-r-- 1 ubuntu ubuntu 221 Jan 20 06:23 Dockerfile
-rw-rw-r-- 1 ubuntu ubuntu 2184 Jan 23 10:00 Jenkinsfile
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 23 07:14 Terraform/
-rw-rw-r-- 1 ubuntu ubuntu 481 Jan 23 07:07 deployment.yaml
drwxrwxr-x 3 ubuntu ubuntu 4096 Jan 20 05:54 dist/
-rw-rw-r-- 1 ubuntu ubuntu 417 Jan 23 07:10 service.yaml
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$
```

Jenkins CI/CD Pipeline

Trendstore pipeline project created

The screenshot shows the Jenkins web interface for a project named 'trendstore-project'. The browser address bar indicates the URL is '65.0.120.218:8080/job/trendstore-project/'. The Jenkins logo and 'trendstore-project' are at the top. On the left, a sidebar contains links for 'Status', 'Changes', 'Build Now', 'Configure', 'Delete Pipeline', 'Stages', 'Rename', and 'Pipeline Syntax'. The main area shows a green checkmark icon next to the project name, followed by 'Trendstore Project'. Below this, a 'Permalinks' section lists several build links: 'Last build (#13), 2 min 35 sec ago', 'Last stable build (#13), 2 min 35 sec ago', 'Last successful build (#13), 2 min 35 sec ago', 'Last failed build (#7), 1 hr 27 min ago', 'Last unsuccessful build (#7), 1 hr 27 min ago', and 'Last completed build (#13), 2 min 35 sec ago'. At the bottom left, a 'Builds' panel shows a list of recent builds: '#13 10:02 am', '#12 10:00 am', and '#11 9:47 am', each with a green checkmark icon. The bottom of the screen shows a Windows taskbar with various icons and system information like '27°C Mostly cloudy' and '15:36 23-01-2026'.

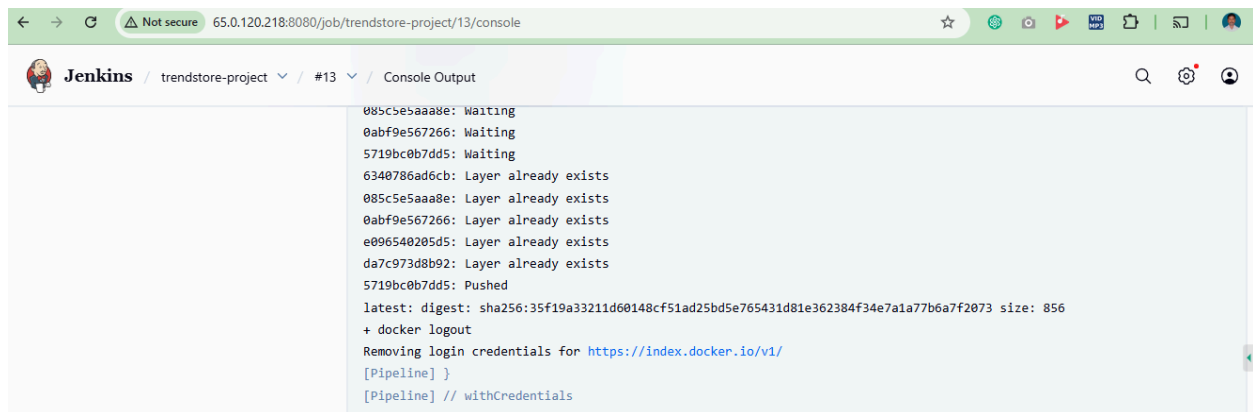
Jenkins Console Output : [URL](#)

Jenkins Build verification

Implemented a CI/CD pipeline using Jenkins to build Docker images, push them to Docker Hub, and deploy them to Kubernetes. The Docker Image ID was validated to ensure the same image was consistently used across the Jenkins build, Docker Hub registry, and Kubernetes deployment stages.

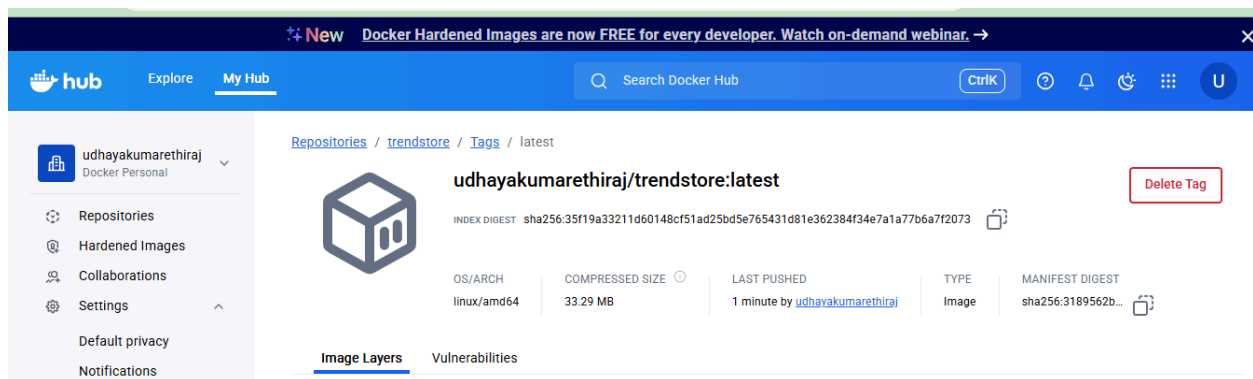
Jenkins build Docker Image pushed details from Jenkins log

Docker image Console output log



```
085c5e5aaa8e: Waiting
0abf9e567266: Waiting
5719bc0b7dd5: Waiting
6340786ad6cb: Layer already exists
085c5e5aaa8e: Layer already exists
0abf9e567266: Layer already exists
e096540205d5: Layer already exists
da7c973d8b92: Layer already exists
5719bc0b7dd5: Pushed
latest: digest: sha256:35f19a33211d60148cf51ad25bd5e765431d81e362384f34e7a1a77b6a7f2073 size: 856
+ docker logout
Removing login credentials for https://index.docker.io/v1/
[Pipeline] }
[Pipeline] // withCredentials
[Pipeline] }
```

Pushed Image details in Docker Hub



udhayakumarethiraj/trendstore:latest Delete Tag

INDEX DIGEST sha256:35f19a33211d60148cf51ad25bd5e765431d81e362384f34e7a1a77b6a7f2073

| OS/ARCH | COMPRESSED SIZE | LAST PUSHED | TYPE | MANIFEST DIGEST |
|-------------|-----------------|--|-------|--------------------|
| linux/amd64 | 33.29 MB | 1 minute by udhayakumarethiraj | Image | sha256:3189562b... |

[Image Layers](#) [Vulnerabilities](#)

The same Image deployed in Kubernetes

pod image details

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ kubectl get pods -A
NAMESPACE   NAME                                     READY   STATUS    RESTARTS   AGE
default      trendstore-868b788886-fh5jf            1/1     Running   0           31s
default      trendstore-868b788886-qlfvh            1/1     Running   0           38s
kube-system  aws-node-86m9l                         2/2     Running   0           3h20m
kube-system  aws-node-sbjv9                         2/2     Running   0           3h20m
kube-system  coredns-6f9885fdb6-6sc4q              1/1     Running   0           3h20m
kube-system  coredns-6f9885fdb6-bztf5              1/1     Running   0           3h20m
kube-system  eks-pod-identity-agent-5z6xh           1/1     Running   0           3h20m
kube-system  eks-pod-identity-agent-9ddpl           1/1     Running   0           3h20m
kube-system  kube-proxy-stx2p                       1/1     Running   0           3h20m
kube-system  kube-proxy-z9w9c                       1/1     Running   0           3h20m
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ kubectl describe pod trendstore-868b788886-fh5jf | grep -E "Image|Image ID"
    Image:      udhayakumarethiraj/trendstore:latest
    Image ID:   docker.io/udhayakumarethiraj/trendstore@sha256:35f19a33211d60148cf51ad25bd5e765431d81e362384f34e7a1a77b6a7f2073
    Normal Pulled    50s   kubelet          Successfully pulled image "udhayakumarethiraj/trendstore:latest" in 8.317s (8.317s including waiting). Image size: 34919963 bytes.
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ ls
```

Application output :

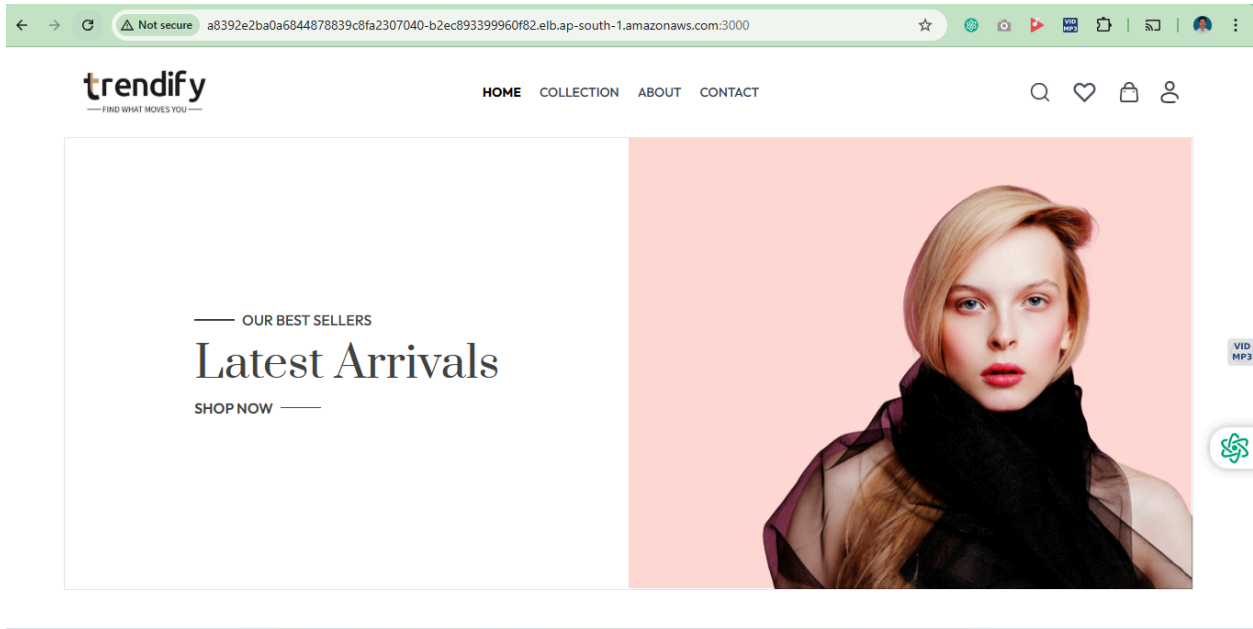
<http://a8392e2ba0a6844878839c8fa2307040-b2ec893399960f82.elb.ap-south-1.amazonaws.com:3000/>

Load balancer ARN

arn:aws:elasticloadbalancing:ap-south-1:758234806674:loadbalancer/net/a8392e2ba0a6844878839c8fa2307040/b2ec893399960f82

Load balancer DNS

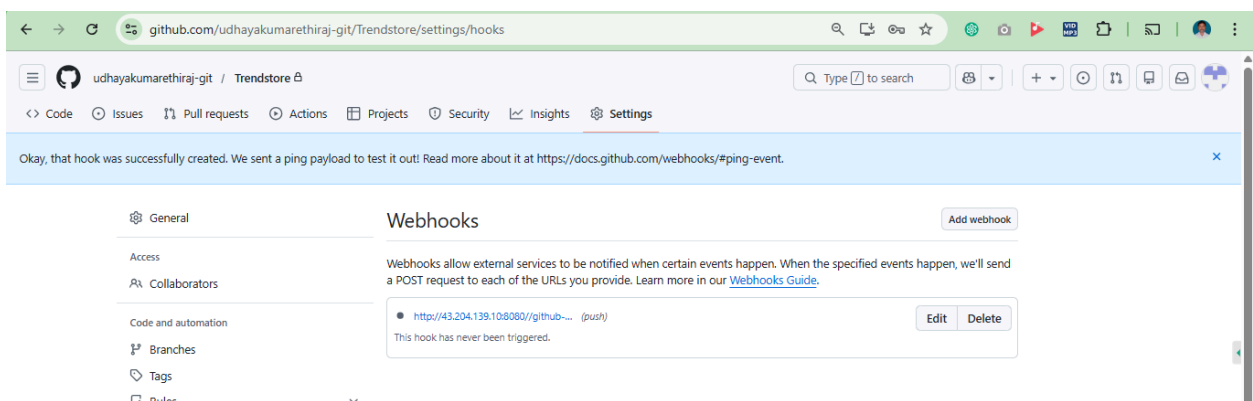
a8392e2ba0a6844878839c8fa2307040-b2ec893399960f82.elb.ap-south-1.amazonaws.com



GitHub and Jenkins Integration

Integrated GitHub with Jenkins using webhooks to automatically trigger builds on every commit, enabling continuous integration and eliminating manual build execution.

Webhook added for build auto trigger



Github webhook Auto Triggered

The screenshot shows the GitHub web interface for the repository 'udhayakumarethiraj-git / Trendstore'. The 'Settings' tab is selected, and the 'Webhooks / Manage webhook' section is active. A recent delivery is listed with a status of 'Completed' and a response code of '200'. The 'Request' tab is selected, displaying the following headers:

```
Request URL: http://43.204.139.10:8080/github-webhook/  
Request method: POST  
Accept: */*  
Content-Type: application/json  
User-Agent: GitHub-Hookshot/9b5ad09  
X-GitHub-Delivery: 953eb384-fb42-11f8-9a4c-0d07306300a5  
X-GitHub-Event: push  
X-GitHub-Hook-ID: 593508993  
X-GitHub-Hook-Installation-Target-ID: 1138008365  
X-GitHub-Hook-Installation-Target-Type: repository
```

Jenkins Build config

The screenshot shows the Jenkins Configuration page for the 'trendstore-project' job. The 'Configure' tab is selected, and the 'Triggers' section is active. The 'GitHub hook trigger for GITScm polling' option is checked, indicating that the build is triggered by GitHub webhooks.

Configure

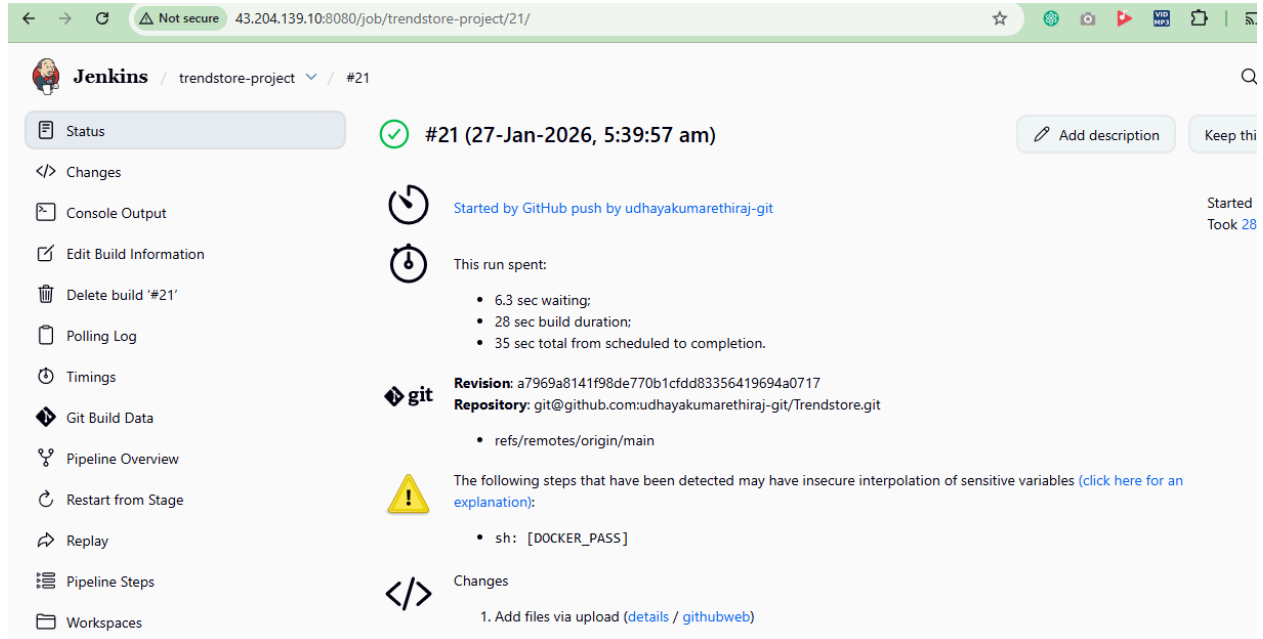
- General
- Triggers
- Pipeline
- Advanced

Triggers

Set up automated actions that start your build based on specific events, like code changes

- ☐ Throttle builds ?
- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☒ GitHub hook trigger for GITScm polling ?
- ☐ Poll SCM ?
- ☐ Trigger builds remotely (e.g., from scripts) ?

Jenkins Build status



A screenshot of the Jenkins web interface showing the build status for a job named 'trendstore-project'. The build is #21, dated 27-Jan-2026 at 5:39:57 am, and is in a successful state (green checkmark). The interface includes a left sidebar with navigation links like 'Status', 'Changes', 'Console Output', and 'Workspaces'. The main content area shows the build details, including a 'git' icon, revision information, and a warning about insecure interpolation of sensitive variables. A 'Changes' section at the bottom lists '1. Add files via upload (details / githubweb)'.

Jenkins / trendstore-project / #21

Status ✓ #21 (27-Jan-2026, 5:39:57 am) Add description Keep this build

</> Changes

Console Output Started by GitHub push by udhayakumarethiraj-git Started Took 28

Edit Build Information

Delete build '#21'

Polling Log

Timings

Git Build Data

Pipeline Overview

Restart from Stage

Replay

Pipeline Steps

Workspaces

This run spent:

- 6.3 sec waiting;
- 28 sec build duration;
- 35 sec total from scheduled to completion.

git **Revision:** a7969a8141f98de770b1cfdd83356419694a0717 **Repository:** git@github.com:udhayakumarethiraj-git/Trendstore.git

- refs/remotes/origin/main

Warning: The following steps that have been detected may have insecure interpolation of sensitive variables ([click here for an explanation](#)):

- sh: [DOCKER_PASS]

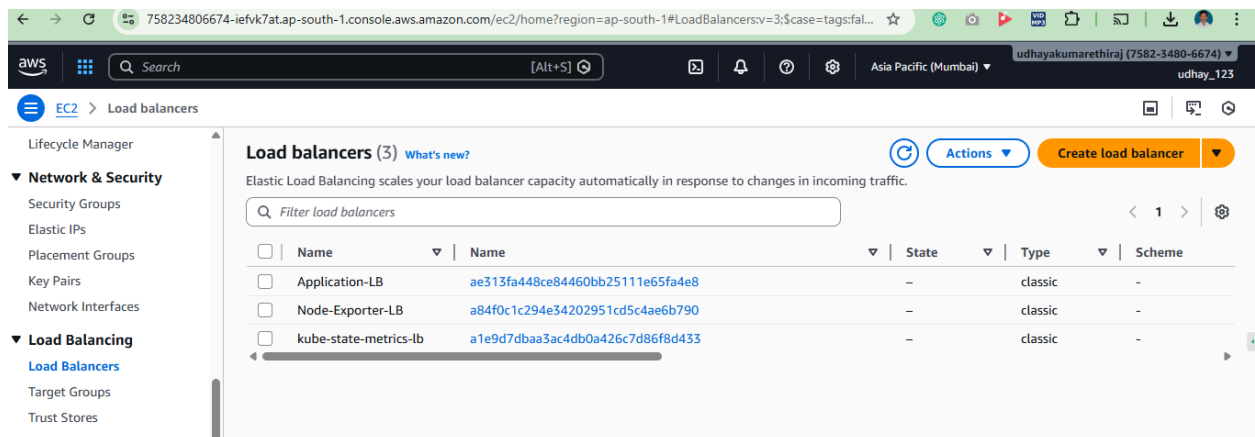
Changes

- Add files via upload ([details](#) / [githubweb](#))

Stage : Monitoring

An open-source monitoring system was implemented using Prometheus to collect cluster and application metrics, and Grafana was configured with dashboards to monitor application health, application URL status, and real-time metrics data.

Kubernetes metrics forwarded to Prometheus Server via loadbalancers



A screenshot of the AWS Management Console showing the 'Load balancers' page. The page displays a table of three load balancers: 'Application-LB', 'Node-Exporter-LB', and 'kube-state-metrics-lb'. The table includes columns for Name, State, Type, and Scheme. The 'Application-LB' and 'Node-Exporter-LB' are of type 'classic', while 'kube-state-metrics-lb' is also of type 'classic'. The page also features a search bar, a 'Filter load balancers' input, and a 'Create load balancer' button.

758234806674-iefvk7at.ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LoadBalancers:v=3;\$case=tags:fa...

aws Search [Alt+S] Asia Pacific (Mumbai) udhayakumarethiraj (7582-3480-6674) udhay_123

EC2 > Load balancers

Lifecycle Manager

▼ Network & Security

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

▼ Load Balancing

- Load Balancers
- Target Groups
- Trust Stores

Load balancers (3) [What's new?](#) Actions Create load balancer

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

| <input type="checkbox"/> | Name | Name | State | Type | Scheme |
|--------------------------|-----------------------|----------------------------------|-------|---------|--------|
| <input type="checkbox"/> | Application-LB | ae313fa448ce84460bb25111e65fa4e8 | - | classic | - |
| <input type="checkbox"/> | Node-Exporter-LB | a84f0c1c294e34202951cd5c4ae6b790 | - | classic | - |
| <input type="checkbox"/> | kube-state-metrics-lb | a1e9d7dbaa3ac4db0a426c7d86f8d433 | - | classic | - |

Prometheus Data from Kubernetes

Targets added to Prometheus

PrometheusAlertsGraphStatusHelp

Targets

All scrape pools -AllUnhealthyCollapse AllFilter by endpoint or labelsUnhealthyUnhealthyUnhealthy

eks-kube-state-metrics (1/1 up)Show logs

| Endpoint | State | Labels | Last Scrape | Scrape Duration | Error |
|---|-------|--|-------------|-----------------|-------|
| http://s1e9d7d8aa3ac4db0a436c7d9f6f8d433-61186772.ap-south-1.elb.amazonaws.com:8080/metrics | UP | instance="2f0b2f0ba23c440a420c7f86f8d433-61186772.ap-south-1.elb.amazonaws.com:8080"job="eks-kube-state-metrics" | 11.120s ago | 13.687ms | |

eks-node-exporter (1/1 up)Show logs

| Endpoint | State | Labels | Last Scrape | Scrape Duration | Error |
|--|-------|---|-------------|-----------------|-------|
| http://a64f9c1c294a34202951cd5c4ae6b790-1482954724.ap-south-1.elb.amazonaws.com:9100/metrics | UP | instance="a64f9c1c294a34202951cd5c4ae6b790-1482954724.ap-south-1.elb.amazonaws.com:9100"job="eks-node-exporter" | 6.742s ago | 159.017ms | |

node_exporter (1/1 up)Show logs

| Endpoint | State | Labels | Last Scrape | Scrape Duration | Error |
|-------------------------------|-------|--|-------------|-----------------|-------|
| http://localhost:9100/metrics | UP | instance="localhost:9100"job="node_exporter" | 11.388s ago | 7.818ms | |

prometheus (1/1 up)Show logs

| Endpoint | State | Labels | Last Scrape | Scrape Duration | Error |
|-------------------------------|-------|---|-------------|-----------------|-------|
| http://localhost:9090/metrics | UP | instance="localhost:9090"job="prometheus" | 8.479s ago | 4.600ms | |

trendstore-app (1/1 up)Show logs

| Endpoint | State | Labels | Last Scrape | Scrape Duration | Error |
|-----------------------------|-------|---|-------------|-----------------|-------|
| http://localhost:9115/probe | UP | instance="http://ae313fa448ce84460bb2511e65fa4e8-228414783.ap-south-1.elb.amazonaws.com:9000"node="http_xaw"target="http://ae313fa448ce84460bb2511e65fa4e8-228414783.ap-south-1.elb.amazonaws.com:9000" | 2.888s ago | 8.874ms | |

Query response

PrometheusAlertsGraphStatusHelp

Use local timeEnable query historyEnable autocompleteEnable highlightingEnable linter

probe_success{job="trendstore-app"}

Execute

Load time: 75msResolution: 14sResult series: 1

TableGraph

Evaluation time

probe_success(instance="http://ae313fa448ce84460bb2511e65fa4e8-228414783.ap-south-1.elb.amazonaws.com:3000",job="trendstore-app")1

Remove Panel

Prometheus Alerts Graph Status Help

Use local time

Enable query history

Enable autocomplete

Enable highlighting

Enable linter

Q

probe_http_status_code{job="trendstore-app"}

Execute

Table

Graph

Load time: 69ms

Resolution: 14s

Result series: 1

<

Evaluation time

>

probe_http_status_code(instance="http://ae313fa448ce84460bb25111e65fa4e8-228414783.ap-south-1.elb.amazonaws.com:3000", job="trendstore-app")

200

Remove Panel

Prometheus Alerts Graph Status Help

Use local time

Enable query history

Enable autocomplete

Enable highlighting

Enable linter

Q

probe_duration_seconds{job="trendstore-app"}

Execute

Table

Graph

Load time: 66ms

Resolution: 14s

Result series: 1

<

Evaluation time

>

probe_duration_seconds(instance="http://ae313fa448ce84460bb25111e65fa4e8-228414783.ap-south-1.elb.amazonaws.com:3000", job="trendstore-app")

0.005879886

```
ubuntu@ip-172-31-28-193:~/projects/trend/trend-repo$ kubectl get svc monitoring-kube-prometheus-prometheus -n monitoring -w
NAME                                TYPE        AGE      CLUSTER-IP      EXTERNAL-IP
monitoring-kube-prometheus-prometheus LoadBalancer 172.20.243.2   aa4183ae50434bda8288b2d02cc0ac3-1358863498.ap-south-1.elb.amazonaws.com 9090:32226/TCP,8080:31249/TCP 112m
```

3.6.205.231:9090/graph?g0.expr=node_cpu_seconds_total&g0.tab=1&g0.stacked=0&g0.show_exemplars=0&g0.range_in...

Prometheus Alerts Graph Status Help

Use local time

Enable query history

Enable autocomplete

Enable highlighting

Enable linter

Q

node_cpu_seconds_total

Execute

Table

Graph

Load time: 70ms

Resolution: 14s

Result series: 1

<

Evaluation time

>

node_cpu_seconds_total(container="node-exporter", cpu="0", endpoint="http-metrics", instance="10.0.0.71:9100", job="node-exporter", mode="idle", namespace="monitoring", pod="monitoring-prometheus-node-exporter-vcbnw", prometheus="monitoring/monitoring-kube-prometheus-prometheus", prometheus_replica="prometheus-monitoring-kube-prometheus-prometheus-0", service="monitoring-prometheus-node-exporter")

20

node_cpu_seconds_total(container="node-exporter", cpu="0", endpoint="http-metrics", instance="10.0.0.71:9100", job="node-exporter", mode="iowait", namespace="monitoring", pod="monitoring-prometheus-node-exporter-vcbnw", prometheus="monitoring/monitoring-kube-prometheus-prometheus", prometheus_replica="prometheus-monitoring-kube-prometheus-prometheus-0", service="monitoring-prometheus-node-exporter")

4.

node_cpu_seconds_total(container="node-exporter", cpu="0", endpoint="http-metrics", instance="10.0.0.71:9100", job="node-exporter", mode="irq", namespace="monitoring", pod="monitoring-prometheus-node-exporter-vcbnw", prometheus="monitoring/monitoring-kube-prometheus-prometheus", prometheus_replica="prometheus-monitoring-kube-prometheus-prometheus-0", service="monitoring-prometheus-node-exporter")

0

node_cpu_seconds_total(container="node-exporter", cpu="0", endpoint="http-metrics", instance="10.0.0.71:9100", job="node-exporter", mode="nice", namespace="monitoring", pod="monitoring-prometheus-node-exporter-vcbnw", prometheus="monitoring/monitoring-kube-prometheus-prometheus", prometheus_replica="prometheus-monitoring-kube-prometheus-prometheus-0", service="monitoring-prometheus-node-exporter")

0.

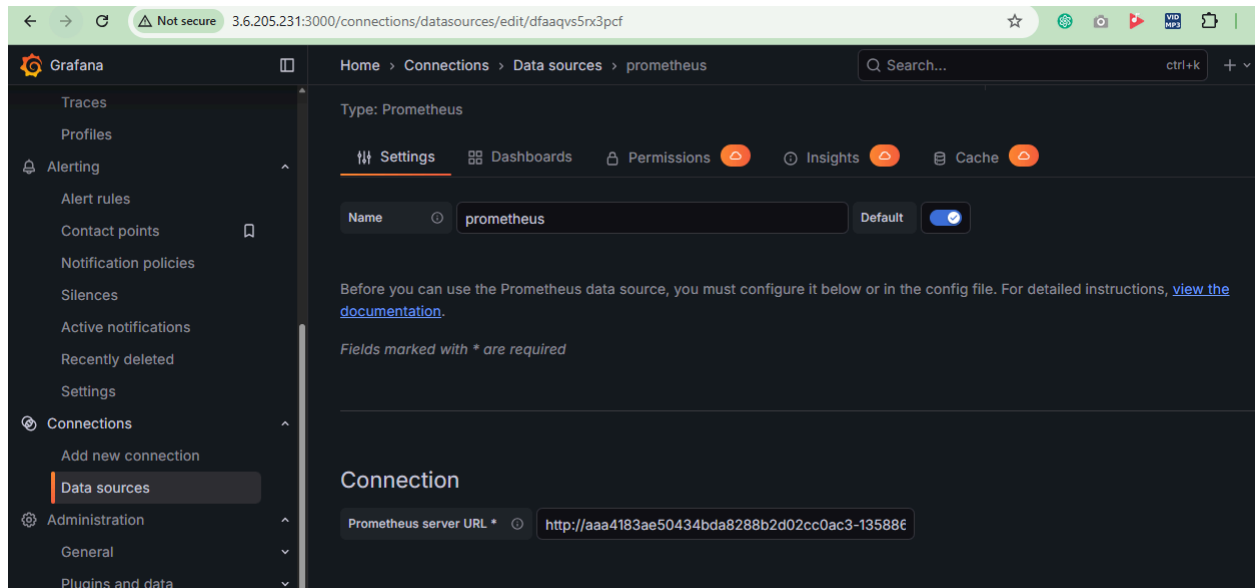
node_cpu_seconds_total(container="node-exporter", cpu="0", endpoint="http-metrics", instance="10.0.0.71:9100", job="node-exporter", mode="softirq", namespace="monitoring", pod="monitoring-prometheus-node-exporter-vcbnw", prometheus="monitoring/monitoring-kube-prometheus-prometheus", prometheus_replica="prometheus-monitoring-kube-prometheus-prometheus-0", service="monitoring-prometheus-node-exporter")

9.

node_cpu_seconds_total(container="node-exporter", cpu="0", endpoint="http-metrics", instance="10.0.0.71:9100", job="node-exporter", mode="steal", namespace="monitoring", pod="monitoring-prometheus-node-exporter-vcbnw", prometheus="monitoring/monitoring-kube-prometheus-prometheus", prometheus_replica="prometheus-monitoring-kube-prometheus-prometheus-0", service="monitoring-prometheus-node-exporter")

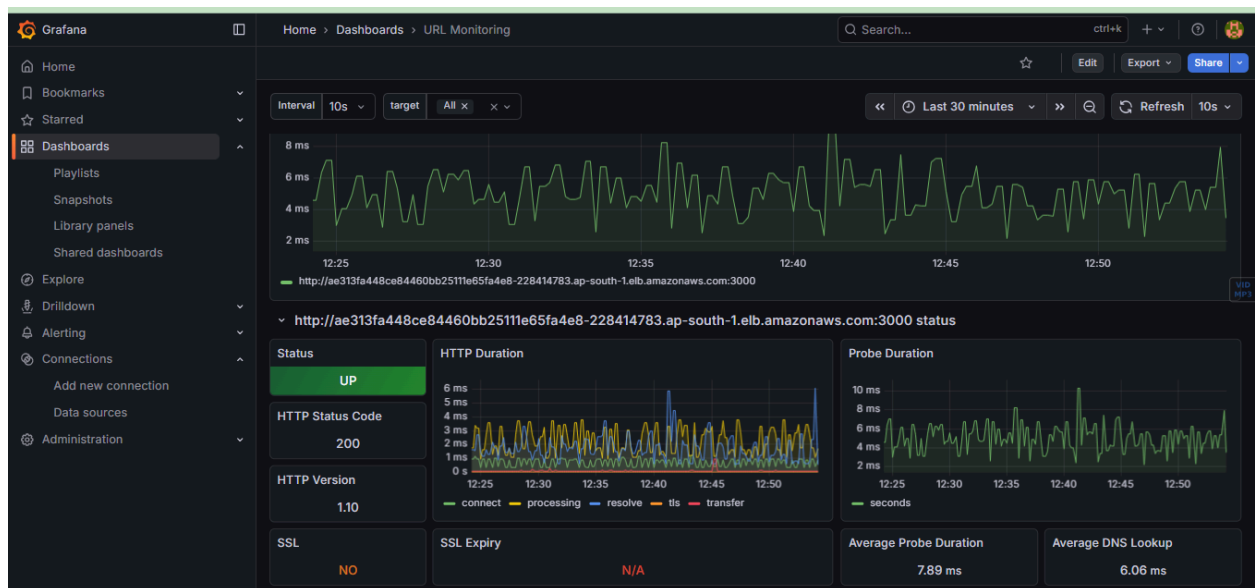
15

Added Kubernetes Data source to Grafana

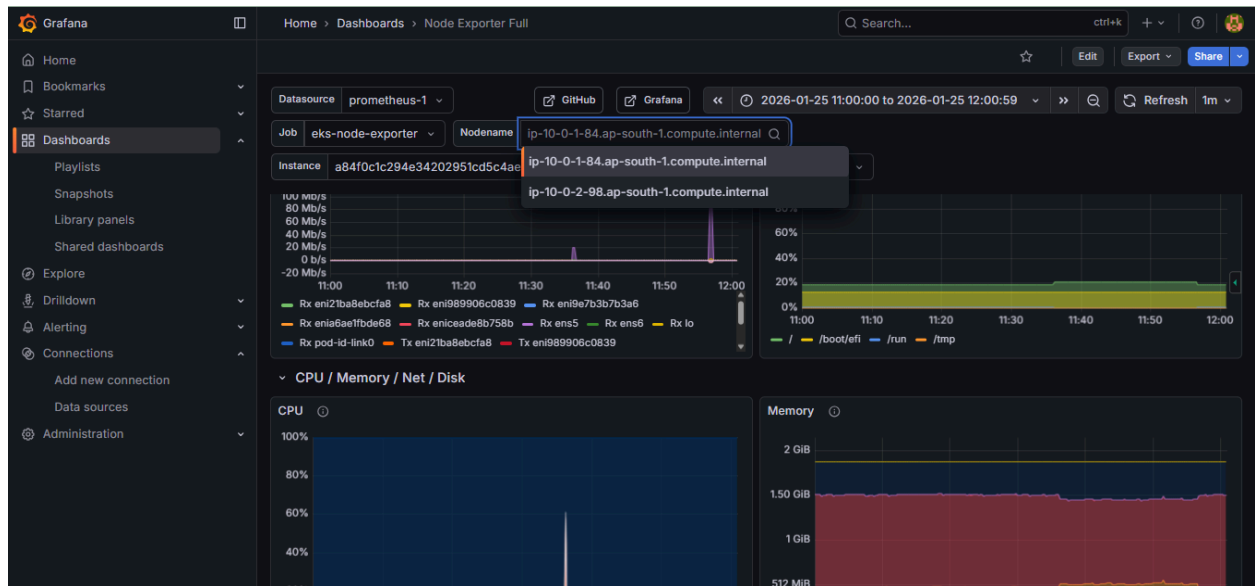


Grafana Dashboards :

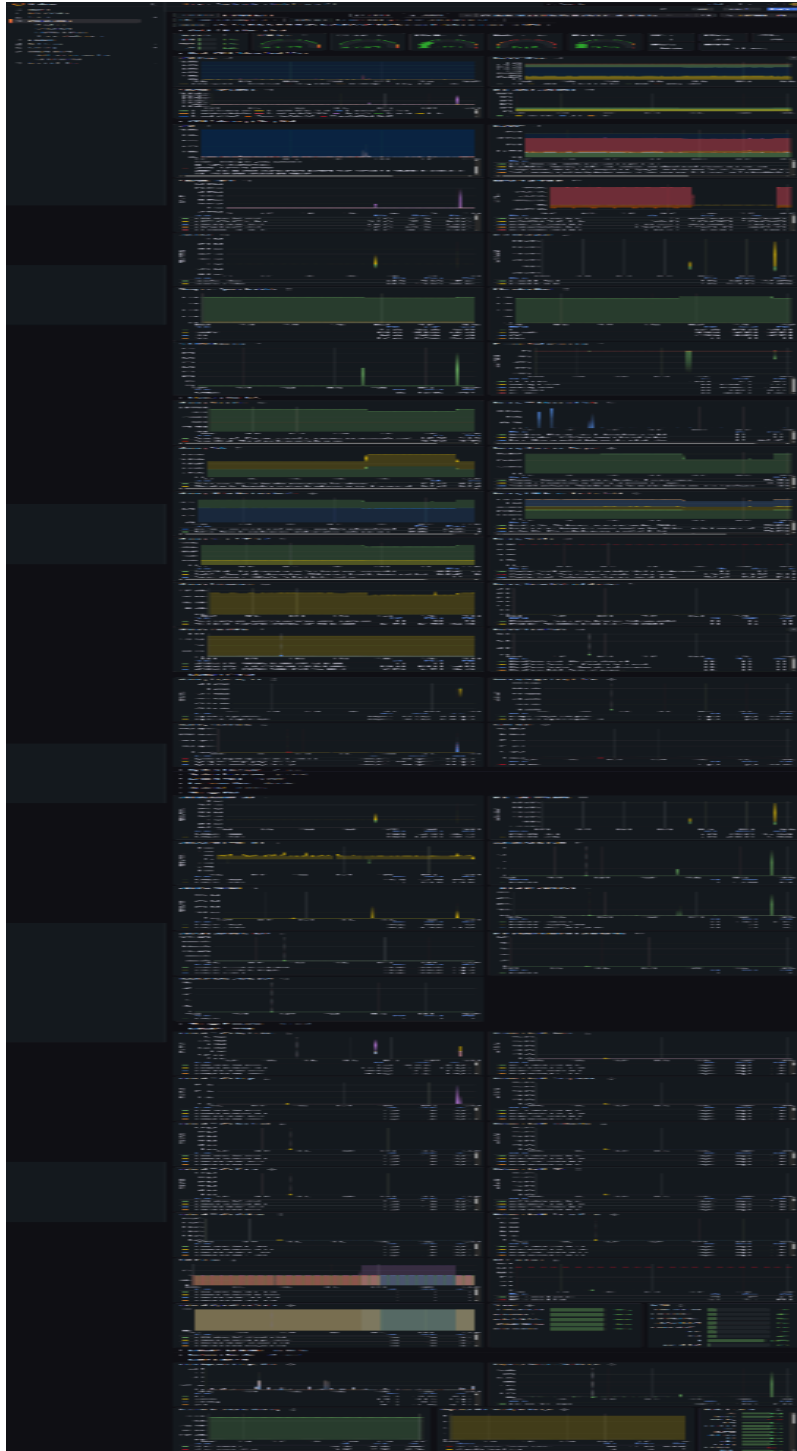
Application URL



Node Monitoring Data



Node Monitoring full page data



Cluster Monitoring Data

Grafana Home Dashboards > Kubernetes Cluster

Search... ctrl+k + - 🔍

Add ▾ Settings Exit edit Save dashboard

datasource prometheus-1 **cluster** **resolution** 30s ⏪ 🕒 2026-01-25 11:00:00 to 2026-01-25 12:00:59 ⏩ 🔍 🔄 Refresh 30s ▾

job eks-node-exporter ✕ ✕ **terraform** 🔵 **oncall** 🔵

Overview

Global CPU Usage
Real

Real

Real

1.53%

Global RAM Usage
Real

Real

Real

29.87%

Nodes
2
Nam...
5
Runn...
13

Kubernetes Resource Count

| Name | Min | Max |
|--------------------|-----|-----|
| Running Containers | 15 | 15 |
| Running Pods | 13 | 13 |
| Configmaps | 12 | 12 |
| Services | 9 | 9 |
| Secrets | 3 | 3 |
| Nodes | 2 | 2 |

CPU Usage

0.0207 0 0.502 0 0

RAM Usage

Peak 572 MiB 0 140 MiB
0 340 MiB 0

Resources

Cluster CPU Utilization

CPU %
150.00%
125.00%
100.00%
75.00%
50.00%
25.00%
0.00%
11:00 11:10 11:20 11:30 11:40 11:50 12:00

Cluster Memory Utilization

MEMORY
34%
33%
32%
31%
30%
29%
11:00 11:10 11:20 11:30 11:40 11:50 12:00

CPU Utilization by namespace

No data

Memory Utilization by namespace

No data

CPU Utilization by instance

CPU %
150.00%
125.00%
100.00%
75.00%
50.00%
25.00%
0.00%
11:00 11:30 12:00
Name
a84f0c1c294e34202951cd5c4ae6b/90-1482954724

Memory Utilization by instance

MEMORY
656 MiB
640 MiB
624 MiB
608 MiB
592 MiB
576 MiB
560 MiB
11:00 11:30 12:00
Name
a84f0c1c294e34202951cd5c4ae6b/90-1482954724

CPU Throttled seconds by namespace

No data

CPU Core Throttled by Instance

No data

Kubernetes

Kubernetes Pods QoS classes

| Name | Min | Max | Mean |
|-----------------|-----|-----|------|
| Total pods | 13 | 13 | 13 |
| BestEffort pods | 7 | 7 | 7 |
| Burstable pods | 6 | 6 | 6 |
| Guaranteed pods | 0 | 0 | 0 |

Kubernetes Pods Status Reason

100
80
60
40
20
0
11:00 11:30 12:00
Name
Evicted
NodeAffinity
NodeLost
Shutdown
UnexpectedAdmissionError

OOM Events by namespace

0
11:00 11:15 11:30 11:45 12:00

Container Restarts by namespace

0
11:00 11:30 12:00

