Application development

Deploy the given react application to a production ready state

Repo URL contain the react application : <https://github.com/sriram-R-krishnan/devops-build>

Github repository contains below files:

1. Dockerfile
2. docker-compose file
3. build.sh – building docker image
4. deploy.sh – to deploy image
5. .dockerignore – specifies which files and directories should be excluded from building
6. .getignore – specifies which files and directories should ignore in a repository
7. Jenkins file – contains a code to build dev and main branch based on the condition provided

URL : https://github.com/ramyaPandian1/capstone-devops-build

Deployed site URL: <http://13.58.211.155:80/>

Docker images name

dev repo : ramyaashwin/dev

main repo : ramyaashwin/main

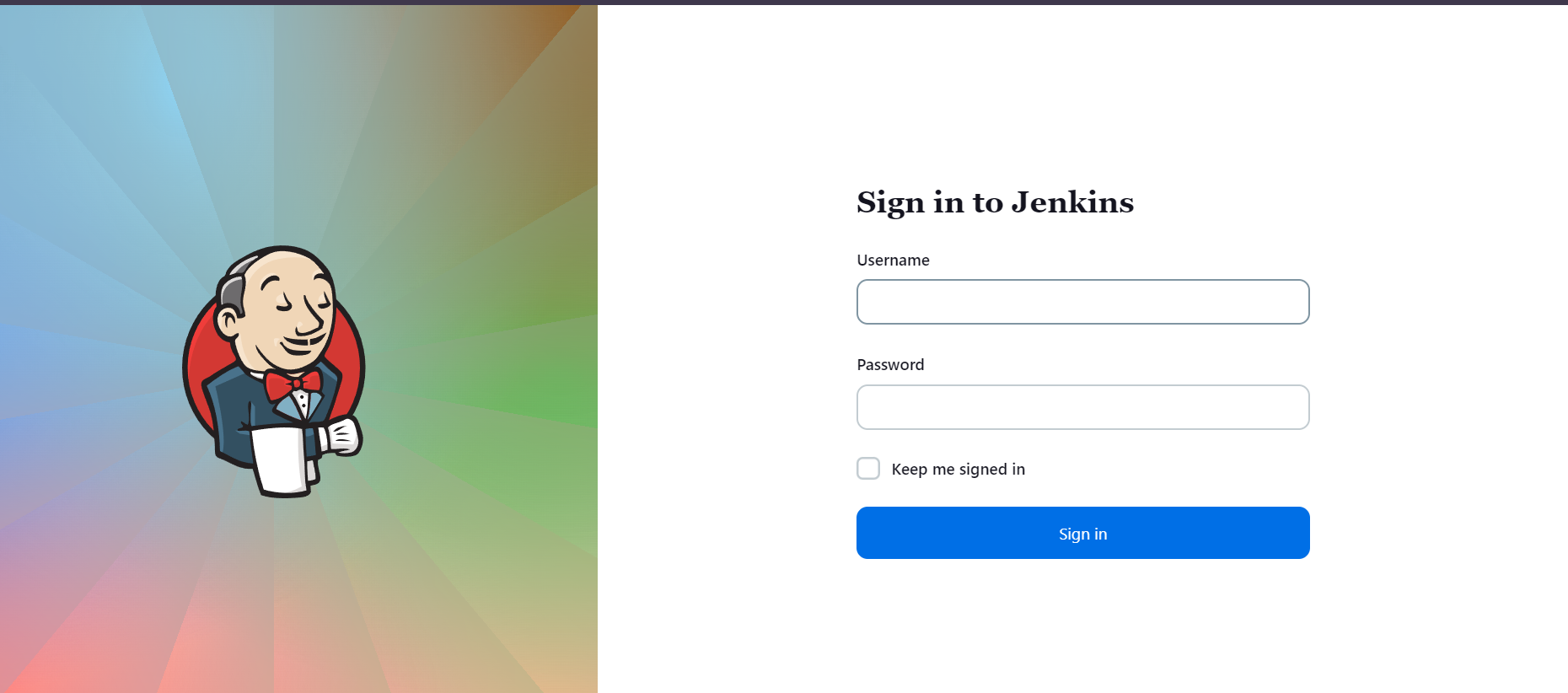
SCREENSHOTS

1. Jenkins

* Used multibranch pipeline to build main and dev branch
* Created Jenkins file which will
  + Login to docker hub – for this created token in docker hub and added in Jenkins configuration
  + If the code is pushed to dev then dev build will run in that build the docker image is pushed to dev repository (public) in docker hub
  + If the dev is merged then docker image is pushed to main repository ( private) in docker hub and also ./deploy.sh will run so that application is deployed

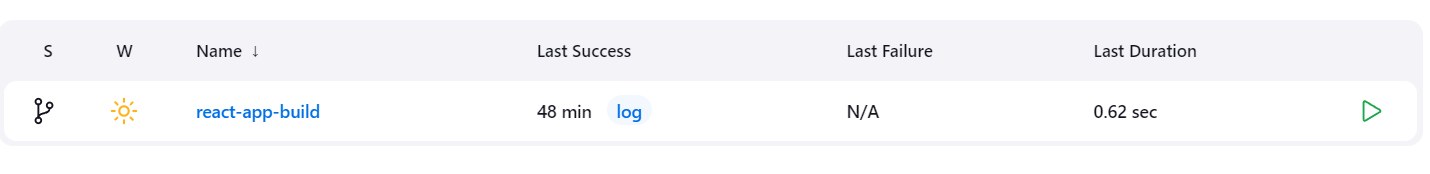
**LOGIN PAGE**

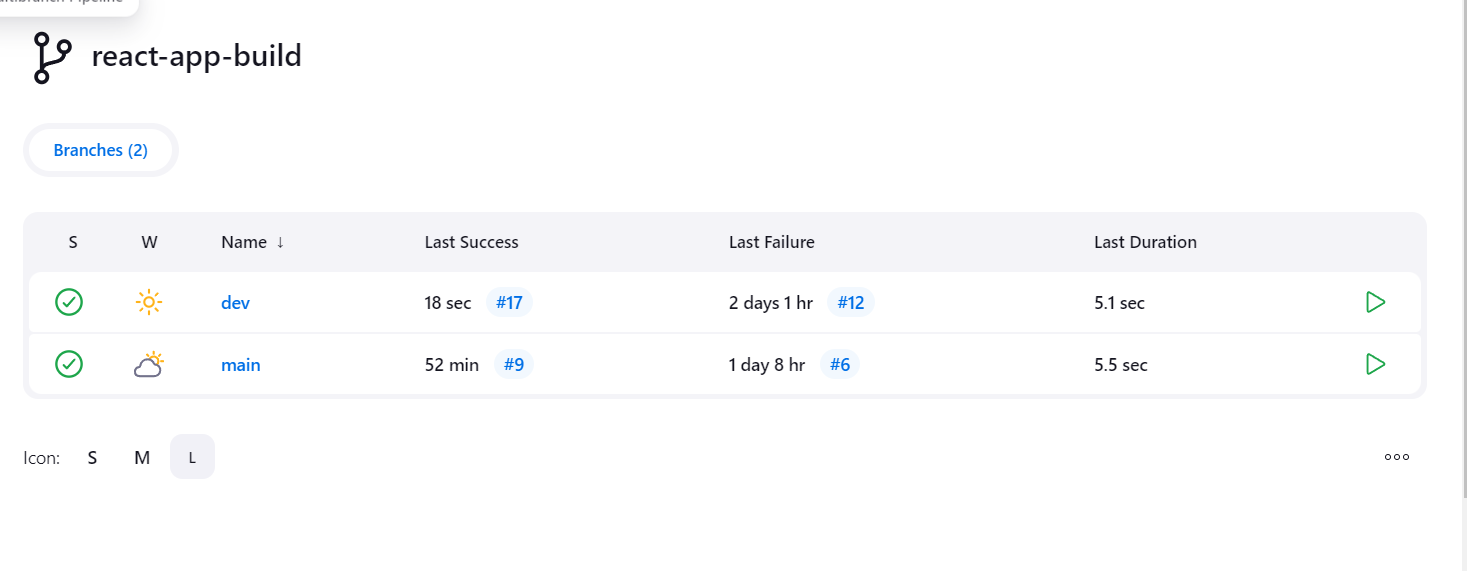
Jenkins URL : <http://13.58.211.155:8080/>



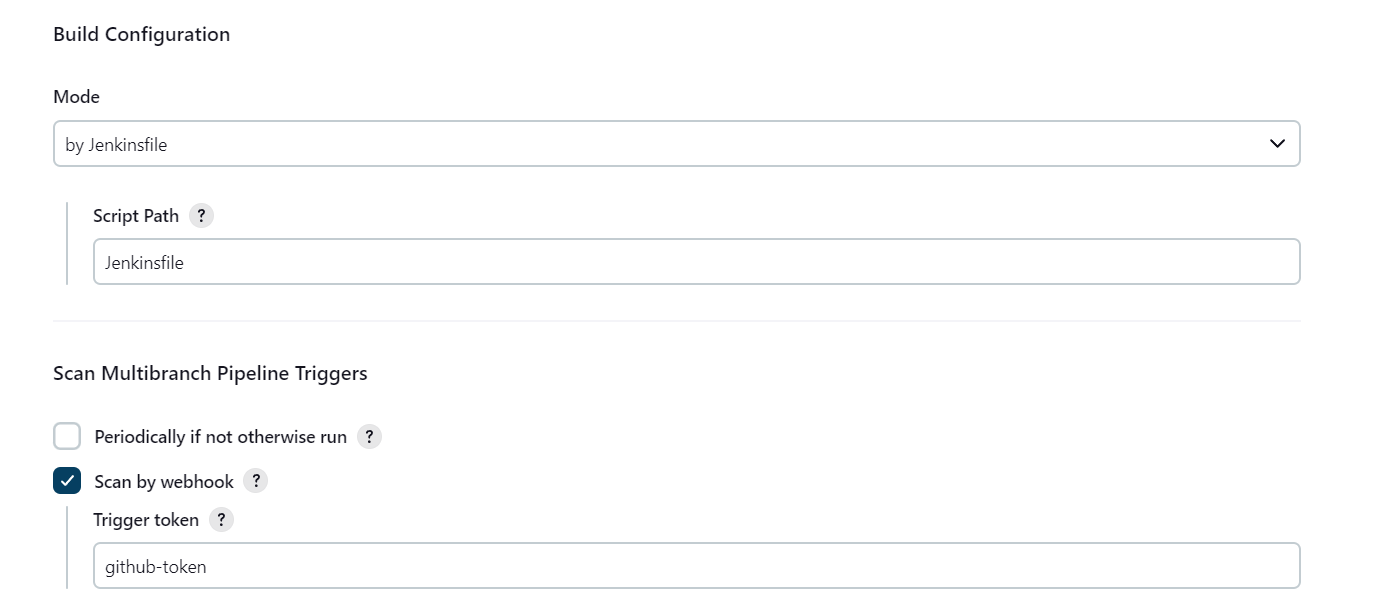
**CONFIGURATION SETTINGS**

1. Credentials :  
   added dockerhub credentials to use in Jenkins file
2. **Multibranch pipeline**





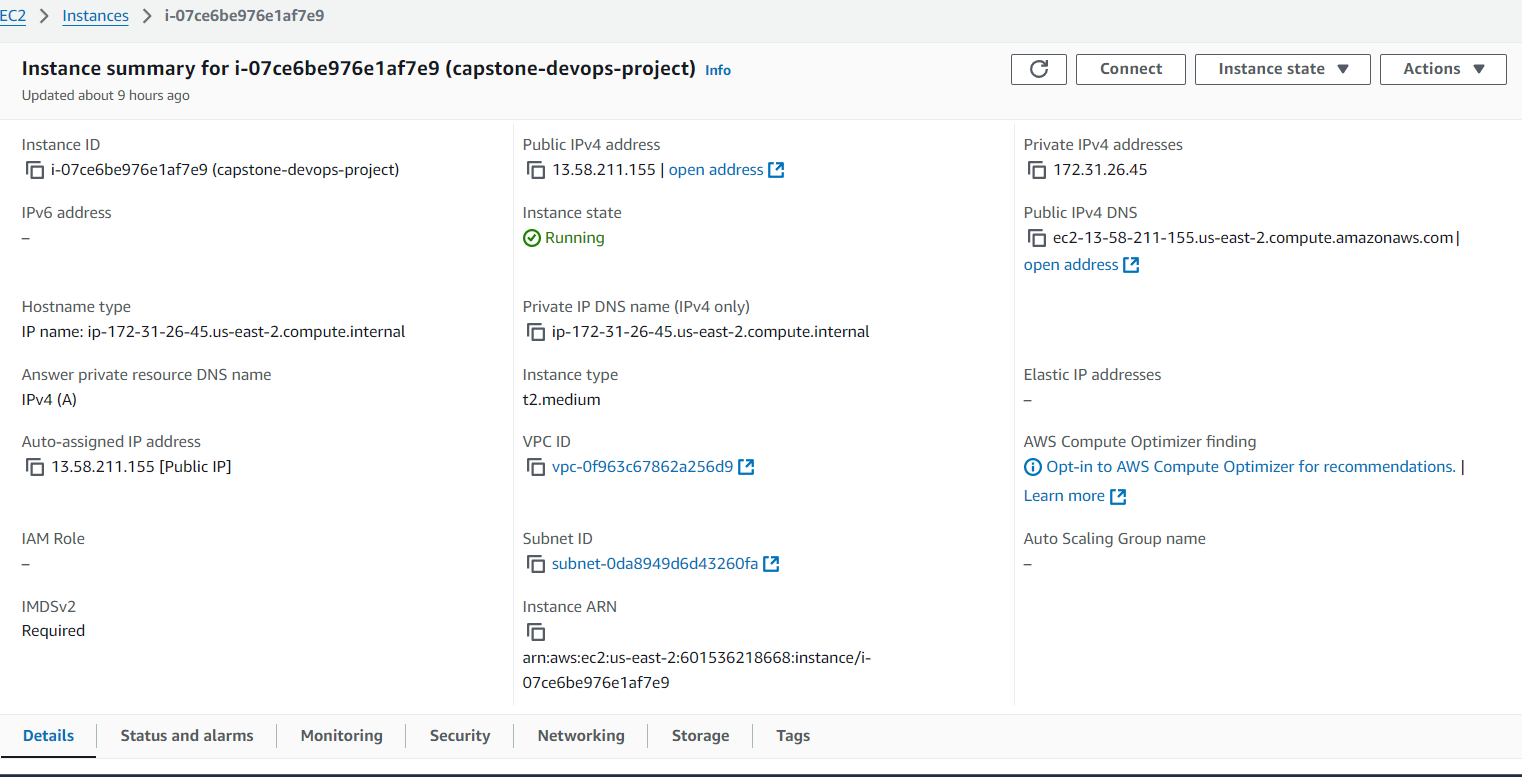




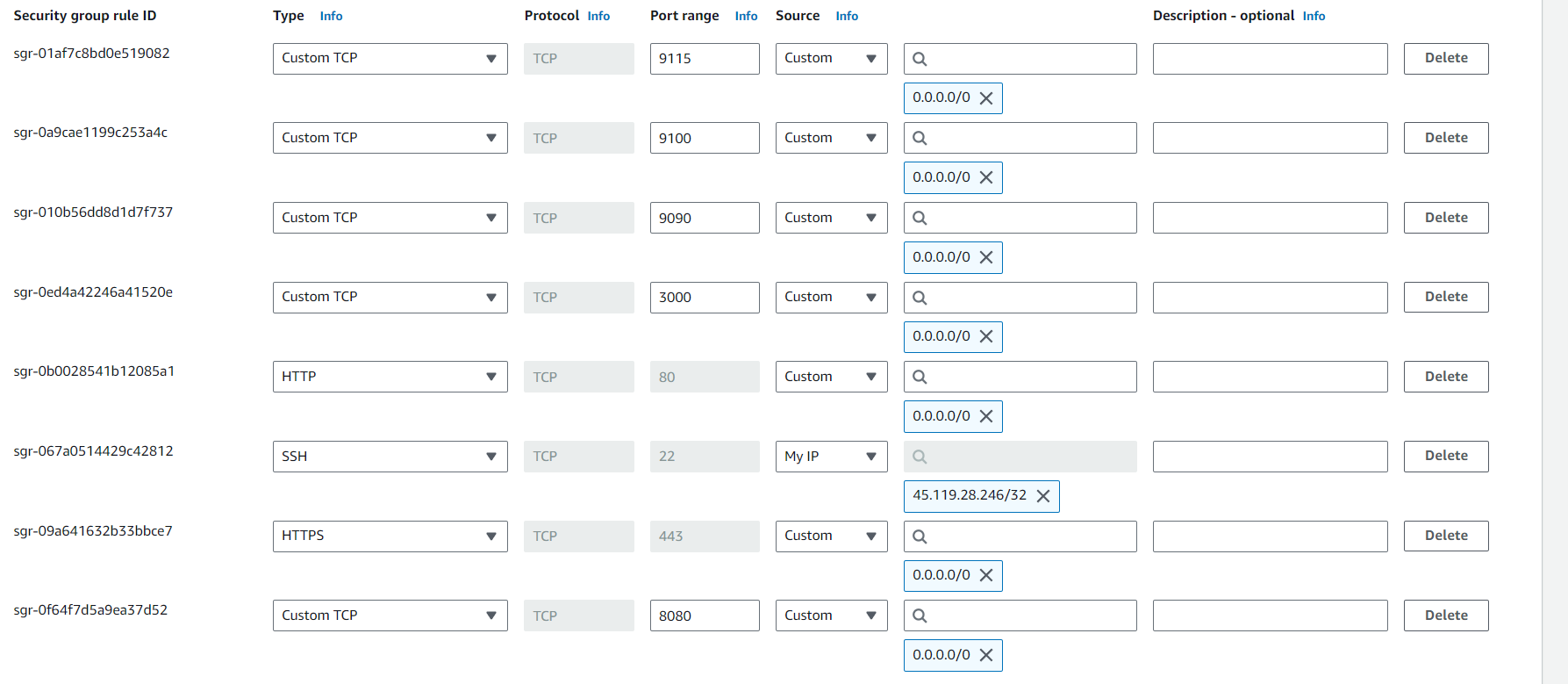
* Used githubwebhook trigger to integrate git and Jenkins
* Commands are passed in Jenkinsfile

**AWS**

1. EC2 console

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1. SG configs

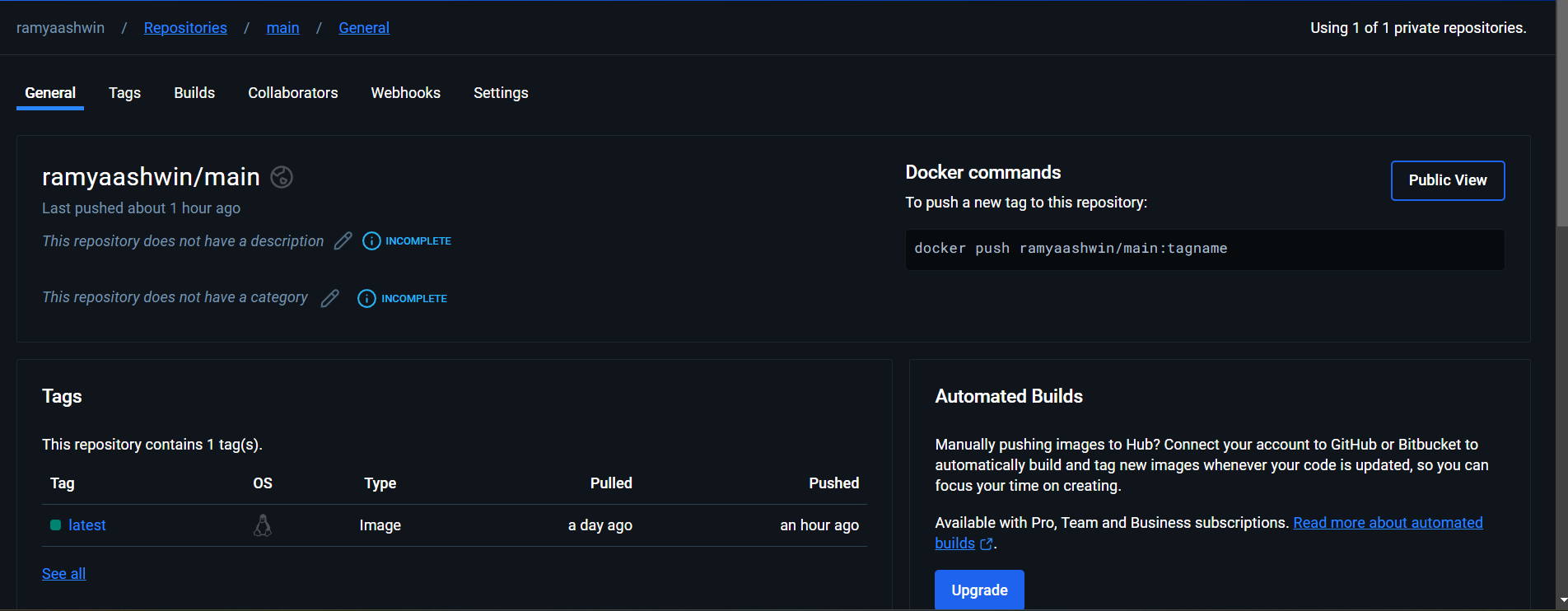
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**DOCKERHUB**

* Main repo

Tag : latest

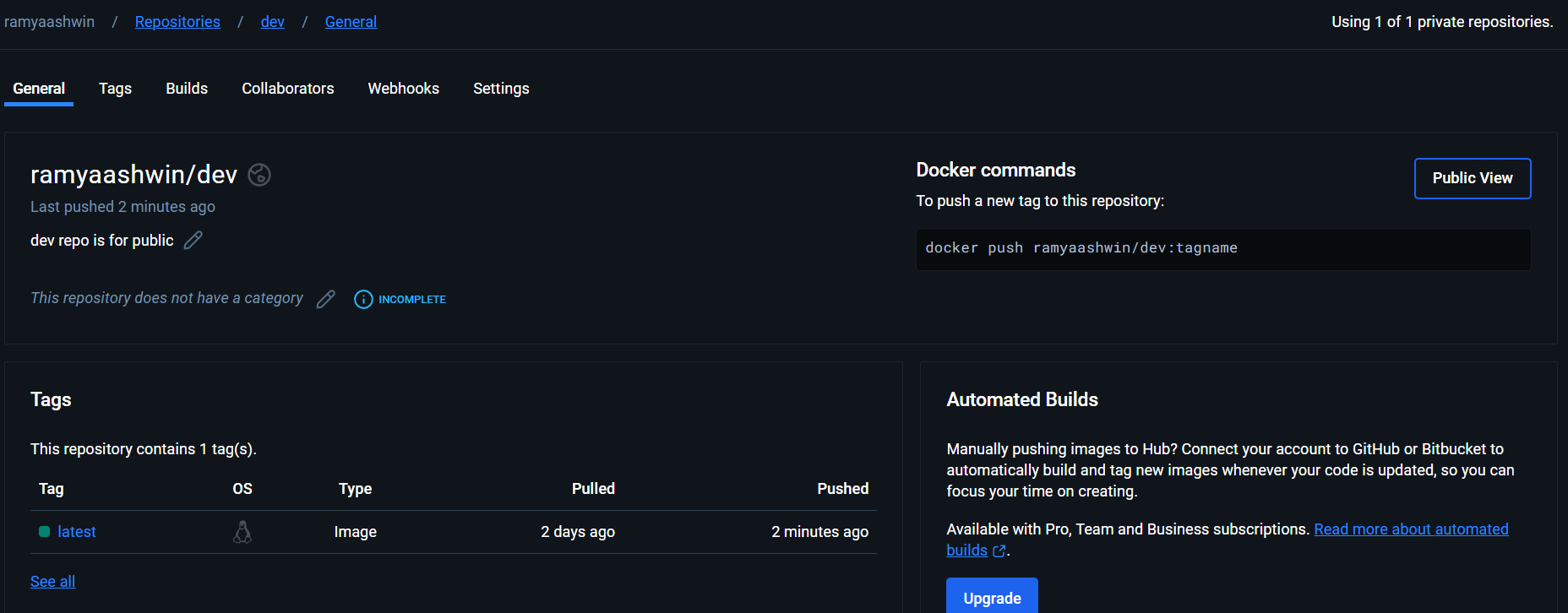
Image name: ramyaashwin/main

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* **Dev repo:**

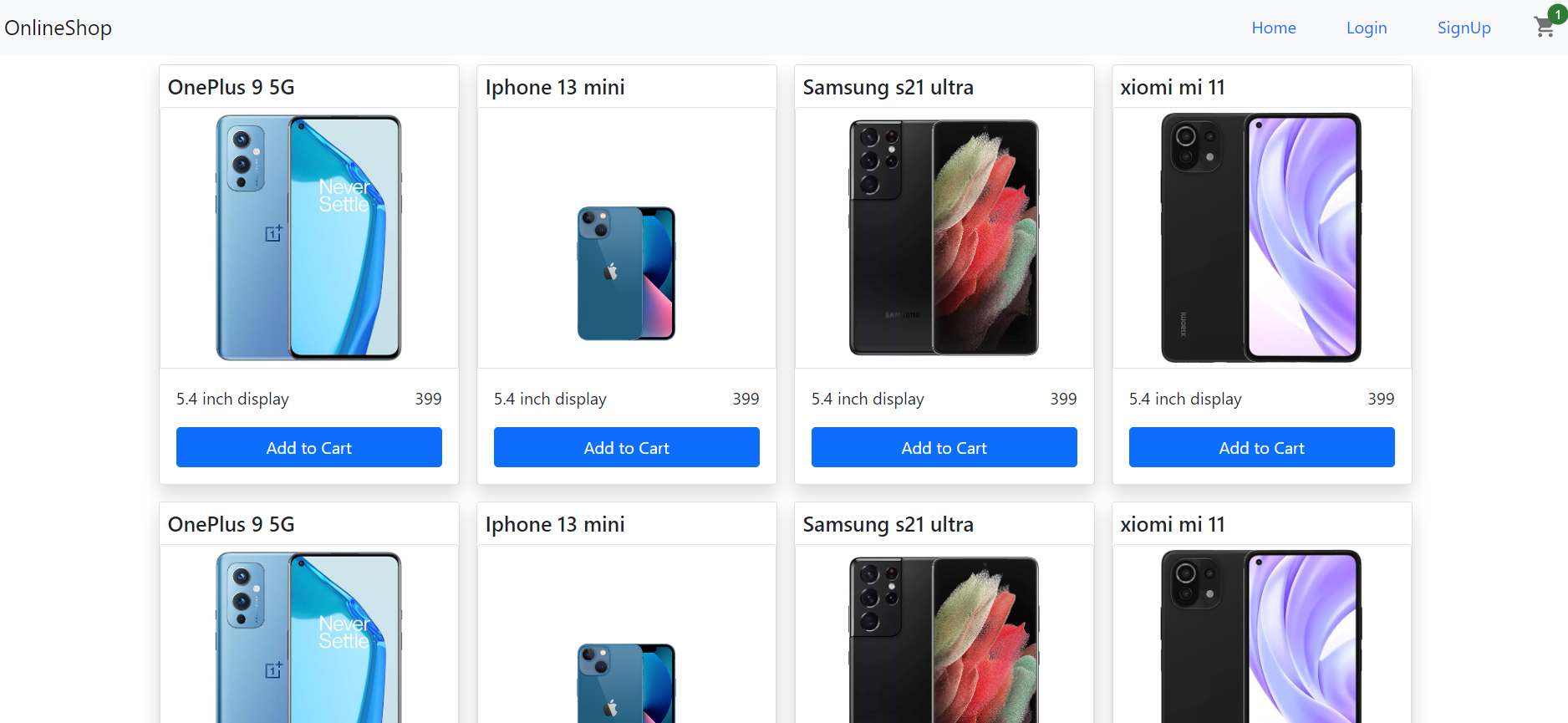
Tag: latest

Image name: ramyaashwin/dev



**Deployed Site page**

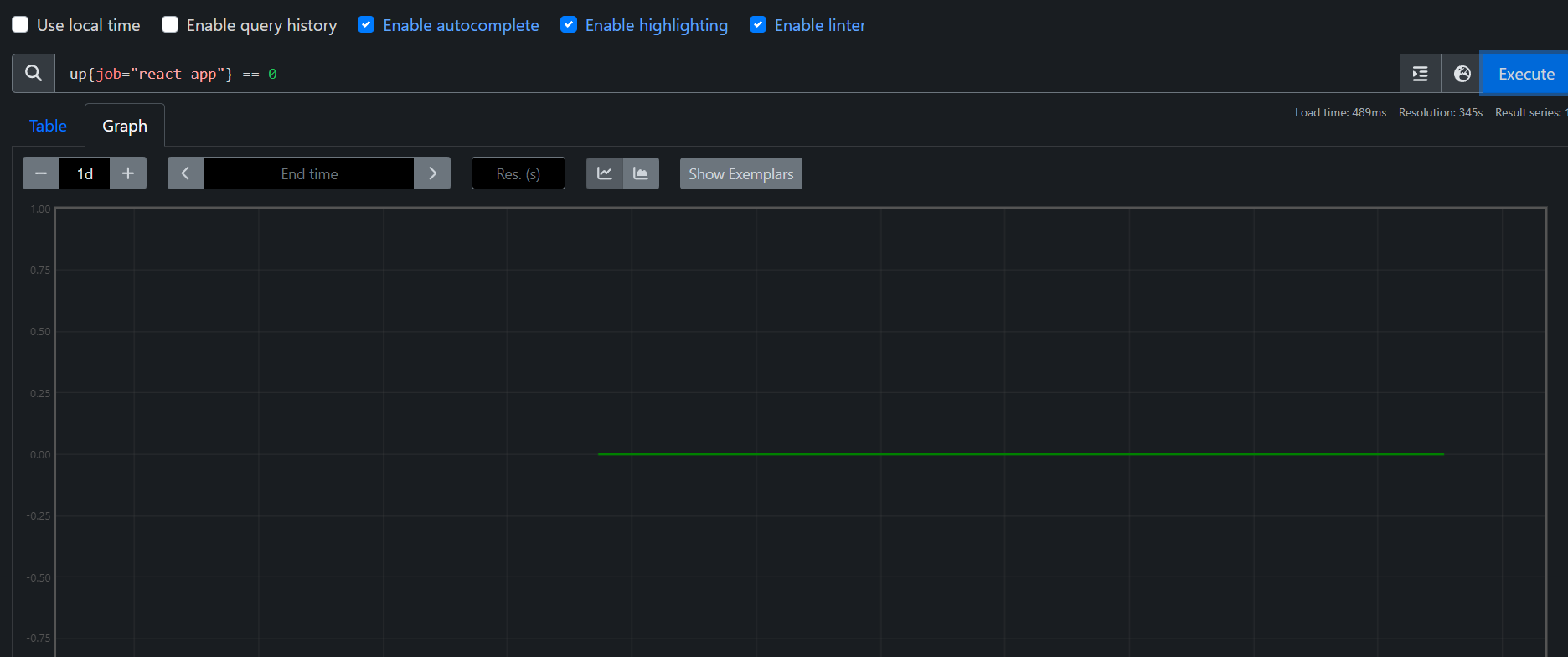
URL: <http://13.58.211.155:80/>

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**Monitoring tool**

* Used Prometheus and Grafana for monitoring
* Prometheus URL: <http://13.58.211.155:9090/>
* Grafana URL: <http://13.58.211.155:3000/>

Prometheus query to check job is in running state

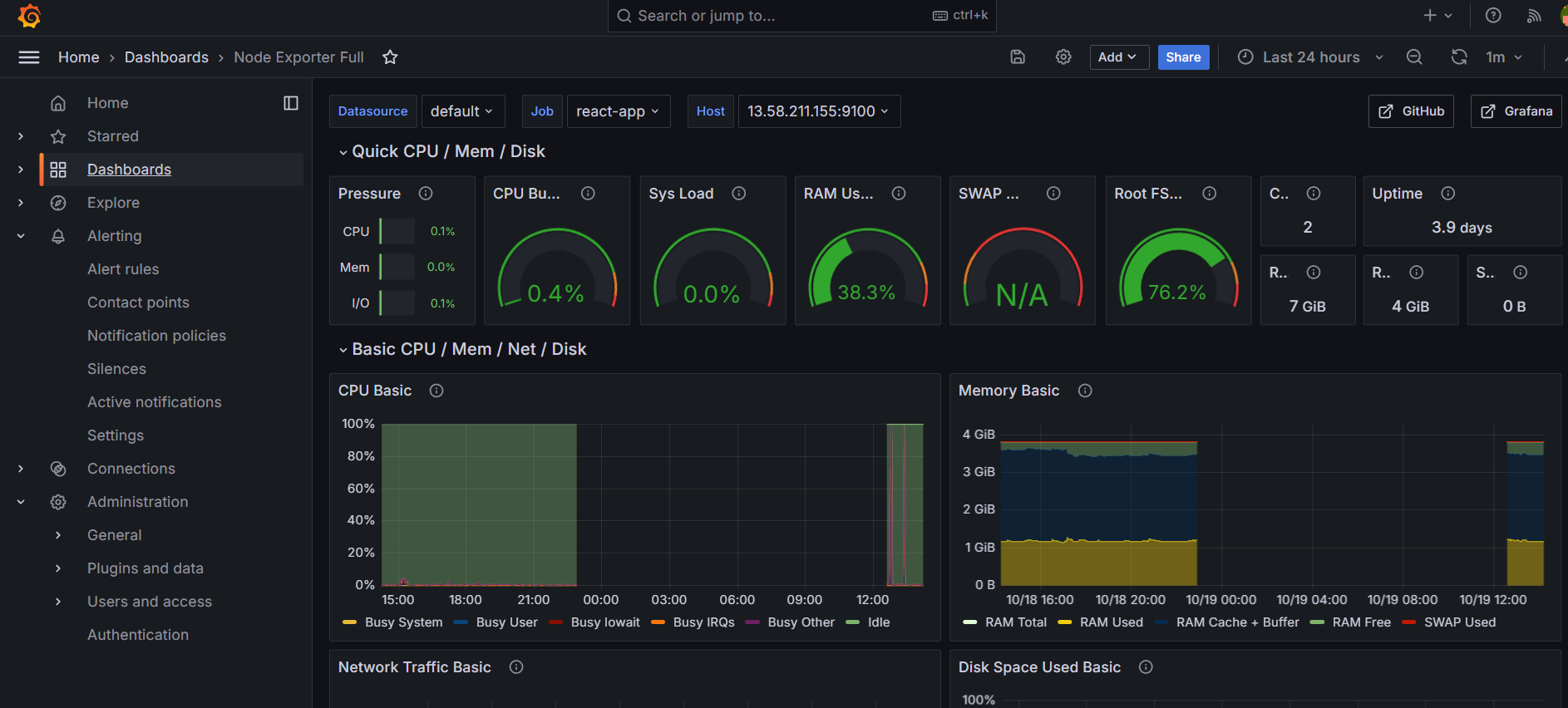
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To monitor CPU usage

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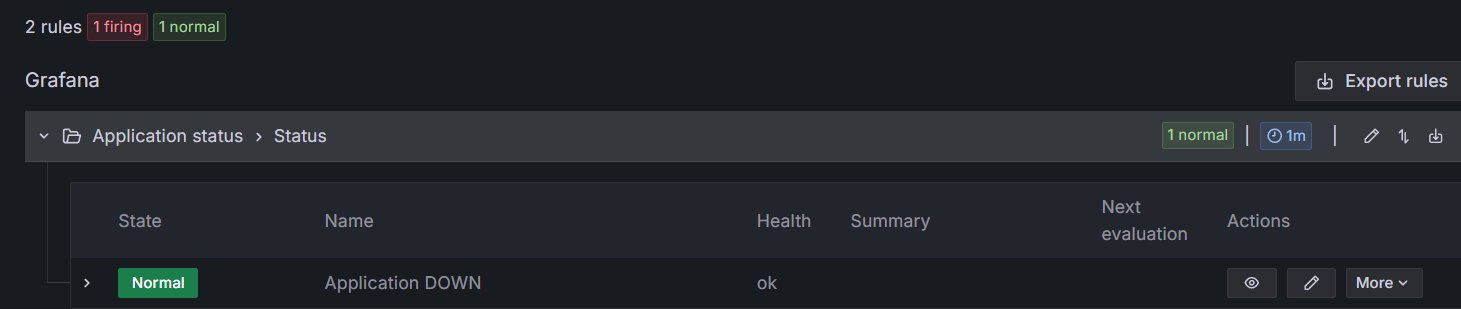
**Grafana :**

Dashboard

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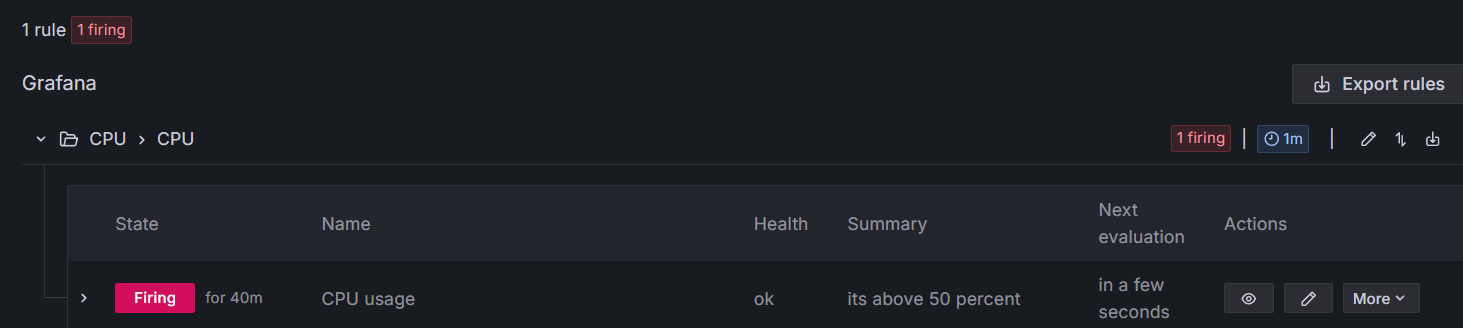
**For email notification**

1. Created a rule to alert in email when the application is down

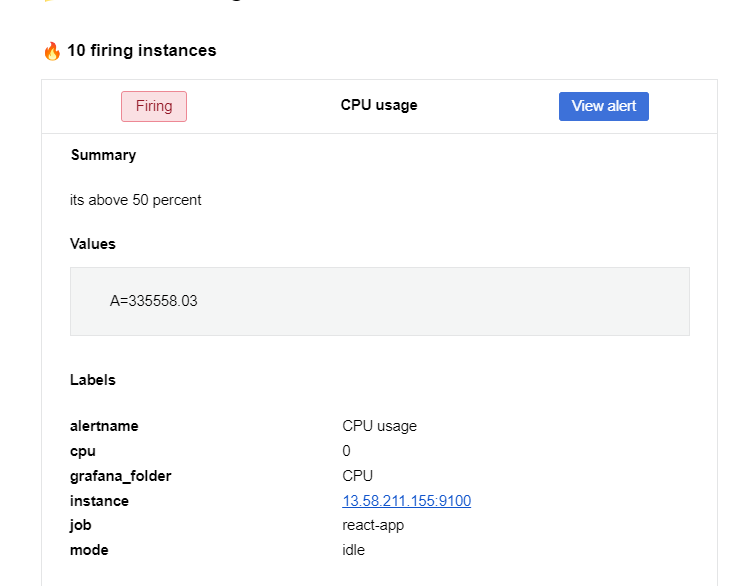
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Unable to make application down Since I want to test the email configuration is correct or not checked with CPU usage and it worked fine

1.created an alert rule for CPU usage more than 50 percent

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Email is triggered when its above 50 percent

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