

```
~/sre-app/k8s/angular-ui$ kubectl -n sre-monitoring get pods
NAME                                READY   STATUS    RESTARTS   AGE
angular-ui-7d5c5f644f-c699p        0/1     Error     0           40s
grafana-6d4895b584-rbzn4           1/1     Running   5 (16h ago) 30h
prometheus-798fbcdbcc-t5tld        1/1     Running   2 (16h ago) 30h

~/sre-app/k8s/angular-ui$ kubectl -n sre-monitoring describe pod angular-ui-7d5c5f644f-c699p
Name:                                angular-ui-7d5c5f644f-c699p
```

```
Events:
Type      Reason      Age      From      Message
-----
Normal    Scheduled   59s      default-scheduler    Successfully assigned sre-monitoring/angular-ui-7d5c5f644f-c699p to minikube
Normal    Pulled      31s      kubelet    Successfully pulled image "hafsazareen/angular-ui:latest" in 23.542s (23.542s including waiting). Image size: 48044260 bytes.
Normal    Pulling     22s (x2 over 54s) kubelet    Pulling image "hafsazareen/angular-ui:latest"
Normal    Created     14s (x2 over 30s) kubelet    Created container: angular-ui
Normal    Started     14s (x2 over 29s) kubelet    Started container angular-ui
Normal    Pulled      14s      kubelet    Successfully pulled image "hafsazareen/angular-ui:latest" in 4.315s (7.201s including waiting). Image size: 48044260 bytes.
Warning   BackOff     6s       kubelet    Back-off restarting failed container angular-ui in pod angular-ui-7d5c5f644f-c699p_sre-monitoring(1ab029e0-9171-4118-8dab-6b05ff1b6eec)
```

```
~/sre-app/k8s/angular-ui$ kubectl -n sre-monitoring logs angular-ui-7d5c5f644f-c699p --all-containers
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: /etc/nginx/conf.d/default.conf differs from the packaged version
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2025/03/25 23:53:11 [emerg] 1#1: host not found in upstream "flask-api-service" in /etc/nginx/conf.d/default.conf:12
nginx: [emerg] host not found in upstream "flask-api-service" in /etc/nginx/conf.d/default.conf:12
```

! rbac.yaml
Dockerfile
⚙️ nginx.conf X
TS polyfills.ts
<> index.html
# styles

angular-ui > ⚙️ nginx.conf

```

1  server {
6
7      location / {
8          try_files $uri $uri/ /index.html;
9      }
10
11     location /api/ {
12         proxy_pass http://flask-api-service.svc.cluster.local:5000/api/;
13         proxy_set_header Host $host;
```

```
~/sre-app$ kubectl apply -f k8s/flask-api/deployment.yaml
deployment.apps/flask-api created
service/flask-api-service created

~/sre-app$ kubectl -n sre-monitoring get services
NAME                                TYPE           CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
angular-ui-service                 ClusterIP      10.104.2.161    <none>           80/TCP           30h
grafana                            ClusterIP      10.96.10.237    <none>           3000/TCP         30h
prometheus                         ClusterIP      10.105.150.221  <none>           9090/TCP         30h
```

```
~/sre-app$ kubectl get services -n default
NAME                                TYPE           CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
backend-service                   ClusterIP      10.110.44.157    <none>           80/TCP           30h
flask-api-service                  ClusterIP      10.109.124.104   <none>           5000/TCP         42s
frontend-service                  ClusterIP      10.108.83.228    <none>           80/TCP           31h
kubernetes                         ClusterIP      10.96.0.1        <none>           443/TCP          31h
```

```
~/sre-app$ kubectl delete -f k8s/flask-api/deployment.yaml # Remove old deployment
kubectl apply -f k8s/flask-api/deployment.yaml --namespace=sre-monitoring # Deploy in correct namespace
deployment.apps "flask-api" deleted
service "flask-api-service" deleted
deployment.apps/flask-api created
service/flask-api-service created

~/sre-app$ kubectl get pods -n sre-monitoring | grep flask-api
flask-api-66575bdf8f-dq95k    0/1    ContainerCreating    0          6s

~/sre-app$ kubectl get pods -n sre-monitoring
NAME                                READY   STATUS              RESTARTS   AGE
angular-ui-7d5c5f644f-c699p        0/1    CrashLoopBackOff    6 (71s ago) 8m42s
flask-api-66575bdf8f-dq95k         0/1    ContainerCreating    0          11s
grafana-6d4895b584-rbzn4          1/1    Running             5 (16h ago) 30h
prometheus-798fcbdcc-t5tld         1/1    Running             2 (16h ago) 30h
```

```
~/sre-app$ kubectl get deployment flask-api -n sre-monitoring -o yaml | grep image
{"apiVersion":"apps/v1","kind":"Deployment","metadata":{"annotations":{},"labels":{"app":"flask-api"},"name":"flask-api","namespace":"sre-monitoring"},"spec":{"replicas":1,"selector":{"matchLabels":{"app":"flask-api"},"template":{"metadata":{"labels":{"app":"flask-api"},"spec":{"containers":[{"env":[{"name":"FLASK_ENV","value":"production"}],"image":"your-dockerhub-username/flask-api:latest","name":"flask-api","ports":[{"containerPort":5000}],"resources":{"limits":{"cpu":"0.5","memory":"512Mi"},"requests":{"cpu":"0.2","memory":"256Mi"}}}}}}}}
image: your-dockerhub-username/flask-api:latest
imagePullPolicy: Always
```

```
~/sre-app$ kubectl edit deployment flask-api -n sre-monitoring
deployment.apps/flask-api edited
~/sre-app$ kubectl apply -f k8s/flask-api/deployment.yaml
deployment.apps/flask-api configured
service/flask-api-service unchanged

~/sre-app$ kubectl get deployment flask-api -n sre-monitoring -o yaml | grep image
{"apiVersion":"apps/v1","kind":"Deployment","metadata":{"annotations":{},"labels":{"app":"flask-api"},"name":"flask-api","namespace":"sre-monitoring"},"spec":{"replicas":1,"selector":{"matchLabels":{"app":"flask-api"},"template":{"metadata":{"labels":{"app":"flask-api"},"spec":{"containers":[{"env":[{"name":"FLASK_ENV","value":"production"}],"image":"your-dockerhub-username/flask-api:latest","name":"flask-api","ports":[{"containerPort":5000}],"resources":{"limits":{"cpu":"0.5","memory":"512Mi"},"requests":{"cpu":"0.2","memory":"256Mi"}}}}}}}}
image: hafsazareen/flask-api:latest
imagePullPolicy: Always

~/sre-app$ kubectl get pods -n sre-monitoring
NAME                                READY   STATUS              RESTARTS   AGE
angular-ui-7d5c5f644f-c699p        1/1    Running             7 (15m ago) 23m
flask-api-6f6679b5b9-cxwbp         1/1    Running             0          47s
grafana-6d4895b584-rbzn4          1/1    Running             5 (16h ago) 30h
prometheus-798fcbdcc-t5tld         1/1    Running             2 (17h ago) 30h
```

## OUTPUT SCREENSHOTS:-

The screenshot shows the Docker Hub interface. The top navigation bar includes the Docker Hub logo, 'Explore', 'My Hub', and a search bar. The left sidebar contains a menu with 'Repositories' selected. The main content area is titled 'Repositories' and shows a list of repositories within a specific namespace. The list includes columns for Name, Last Pushed, Contains, Visibility, and Scout. The repositories listed are /flask-api, /angular-ui, /react-sre-app, /python-docker-app, and /python-docker-project-web.

Name	Last Pushed	Contains	Visibility	Scout
/flask-api	about 1 hour ago	IMAGE	Public	Inactive
/angular-ui	about 1 hour ago	IMAGE	Public	Inactive
/react-sre-app	5 days ago	IMAGE	Public	Inactive
/python-docker-app	29 days ago	IMAGE	Public	Inactive
/python-docker-project-web	29 days ago	IMAGE	Public	Inactive

← → ↻ ⓘ localhost:8081

# Welcome to SRE Dashboard

← → ↻ ⓘ localhost:5000/api/metrics

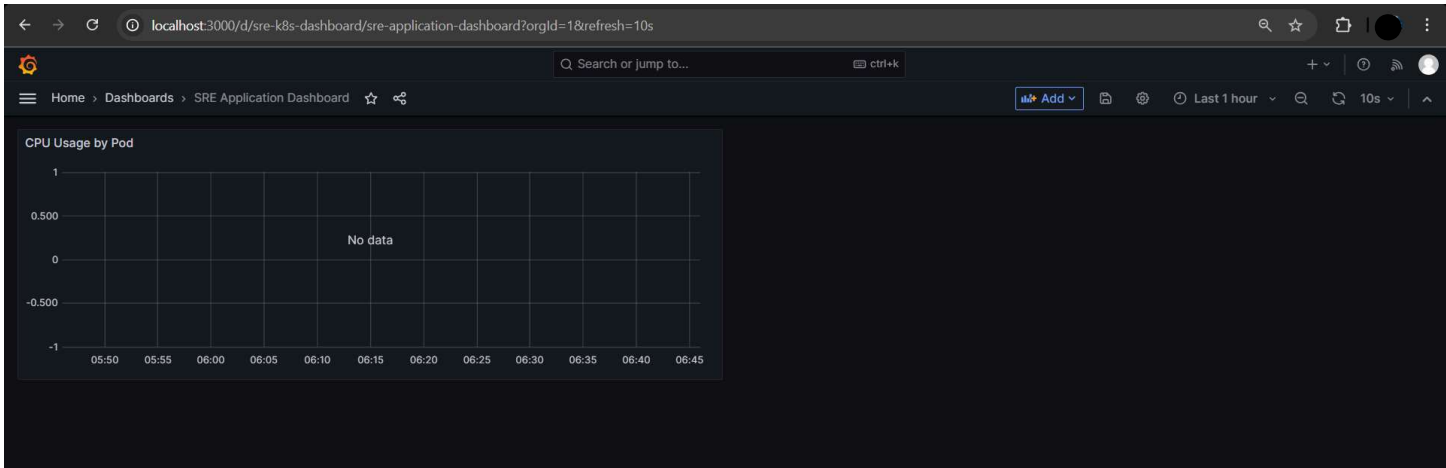
Pretty print ☒

```
{
  "cpu_usage": 30.5,
  "disk_usage": 60.8,
  "memory_usage": 45.2,
  "network_io": {
    "received_bytes": 2048000,
    "sent_bytes": 1024000
  }
}
```

localhost:5000/api/alerts

Pretty print

[  
 {  
 "id": 1,  
 "message": "High CPU usage detected",  
 "severity": "critical",  
 "timestamp": "2025-03-20T10:30:00Z"  
 },  
 {  
 "id": 2,  
 "message": "Memory usage above threshold",  
 "severity": "warning",  
 "timestamp": "2025-03-20T11:45:00Z"  
 },  
 {  
 "id": 3,  
 "message": "System update available",  
 "severity": "info",  
 "timestamp": "2025-03-20T09:15:00Z"  
 }  
]



localhost:9090/targets?search=

Prometheus

Alerts

Graph

Status

Help

Targets

All scrape pools

Unhealthy

Collapse All

Filter by endpoint or labels

Unknown

Unhealthy

Healthy

flask-app (1/1 up)

show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://flask-api-service:5000/metrics	UP	instance="flask-api-service-5000" job="flask-app"	10.352s ago	14.344ms	

prometheus (1/1 up)

show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	10.453s ago	13.266ms	