

SCREENSHOTS OF EACH STEP:

Command to start minikube cluster using docker driver:

```
Activities Terminal 21 Nov 23:57
arshdeep@localhost:~
[arshdeep@localhost ~]$ minikube status
minikube
type: Control Plane
host: Stopped
kublet: Stopped
apiserver: Stopped
kubeconfig: Stopped

[arshdeep@localhost ~]$ minikube start -driver=docker
```

Checking the status of the pods – Grafana and mariadb:

```
[arshdeep@localhost ~]$ kubectl get pod
NAME                                READY   STATUS    RESTARTS   AGE
my-grafana-56896fc78f-6cv9d        1/1     Running   3 (21h ago)  29h
my-mariadb-0                        1/1     Running   4 (21h ago)  29h
```

Forwarding ports:

```
[arshdeep@localhost ~]$ kubectl port-forward svc/my-mariadb 3306:3306 &
[1] 11411
[arshdeep@localhost ~]$ Forwarding from 127.0.0.1:3306 -> 3306
Forwarding from [::1]:3306 -> 3306

[arshdeep@localhost ~]$ kubectl port-forward svc/my-grafana 3000:80 &
[2] 11573
[arshdeep@localhost ~]$ Forwarding from 127.0.0.1:3000 -> 3000
Forwarding from [::1]:3000 -> 3000
```

Checking that the database is up and running:

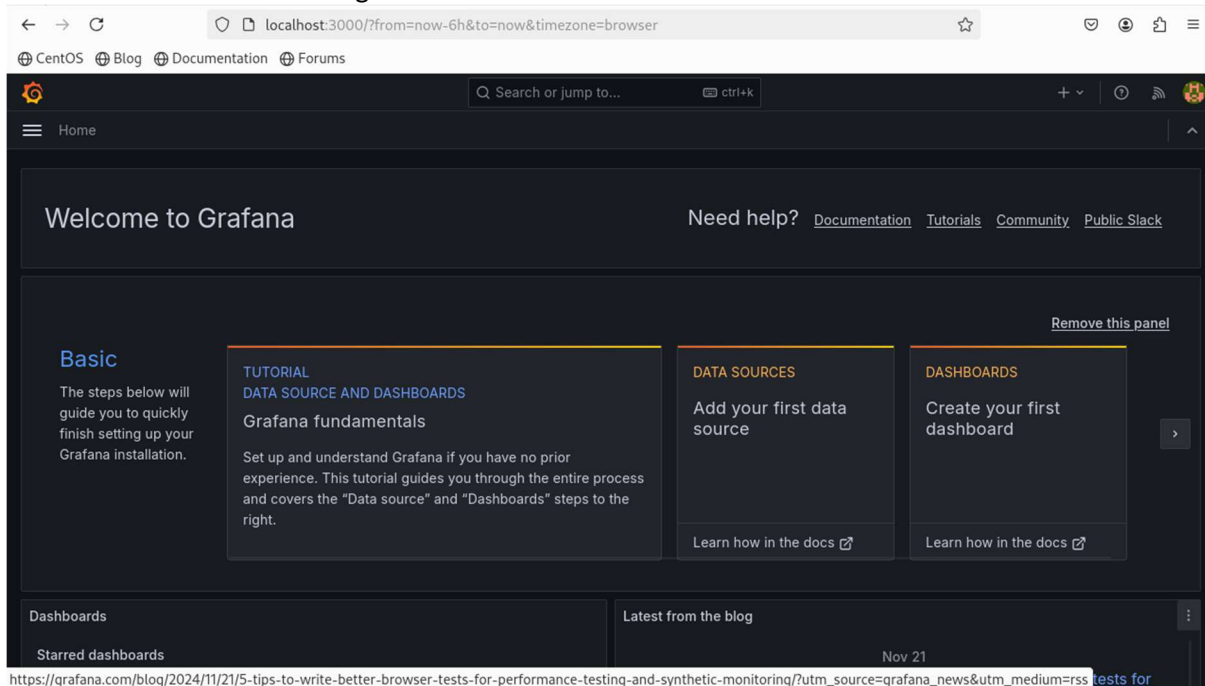
```
[arshdeep@localhost ~]$ kubectl run my-mariadb-client --rm --tty -i --restart='Never' --image docker.io/bitnami/mariadb:11.4.4-debian-12-r0 --namespace default --command -- bash
If you don't see a command prompt, try pressing enter.
I have no name!@my-mariadb-client:/$
I have no name!@my-mariadb-client:/$ mysql -h my-mariadb.default.svc.cluster.local -uroot -p testdb
mysql: Deprecated program name. It will be removed in a future release, use '/opt/bitnami/mariadb/bin/mariadb' instead
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 76
Server version: 11.4.4-MariaDB Source distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [testdb]>
```

Connection of Grafana through localhost:



Running the robotframework to create a table in the database:

```
[arshdeep@localhost k8s-automation]$ robot tests/database.robot
=====
Database
=====
Create Table and Load Data | PASS |
=====
Database | PASS |
1 test, 1 passed, 0 failed
=====
Output: /home/arshdeep/k8s-automation/output.xml
Log: /home/arshdeep/k8s-automation/log.html
Report: /home/arshdeep/k8s-automation/report.html
[arshdeep@localhost k8s-automation]$
```

Verifying the database and checking the tables:

```
MariaDB [testdb]> use testdb;
Database changed
MariaDB [testdb]> show tables;
+-----+
| Tables_in_testdb |
+-----+
| metrics           |
+-----+
1 row in set (0.001 sec)

MariaDB [testdb]>
MariaDB [testdb]> select * from metrics;
+-----+-----+-----+
| id | timestamp                | value |
+-----+-----+-----+
| 1 | 2024-11-21 19:10:34      | 10.5  |
| 2 | 2024-11-21 19:10:34      | 20.7  |
| 3 | 2024-11-21 19:10:34      | 30.1  |
+-----+-----+-----+
3 rows in set (0.004 sec)

MariaDB [testdb]>
```

Running the command to create datasource and dashboard on Grafana

```
[arshdeep@localhost k8s-automation]$ robot tests/grafana.robot
=====
Grafana
=====
Configure Grafana | PASS |
-----
Grafana | PASS |
1 test, 1 passed, 0 failed
=====
Output: /home/arshdeep/k8s-automation/output.xml
Log:    /home/arshdeep/k8s-automation/log.html
Report: /home/arshdeep/k8s-automation/report.html
[arshdeep@localhost k8s-automation]$
```