

SCREENSHOTS OF EACH STEP:

Deploying mariadb pod:

```
[arshdeep@localhost ~]$ helm install my-mariadb bitnami/mariadb --set auth.rootPassword=arshdeep --set auth.database=testdb

NAME: my-mariadb
LAST DEPLOYED: Sat Nov 23 20:42:33 2024
NAMESPACE: default
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
CHART NAME: mariadb
CHART VERSION: 20.0.0
APP VERSION: 11.4.4
```

Deploying Grafana pod:

```
[arshdeep@localhost ~]$ helm install my-grafana grafana/grafana --set adminPassword=arshdeep

NAME: my-grafana
LAST DEPLOYED: Sat Nov 23 20:44:42 2024
NAMESPACE: default
STATUS: deployed
REVISION: 1
NOTES:
1. Get your 'admin' user password by running:

    kubectl get secret --namespace default my-grafana -o jsonpath="{.data.admin-password}" | base64 --decode ; echo

2. The Grafana server can be accessed via port 80 on the following DNS name from within your cluster:
```

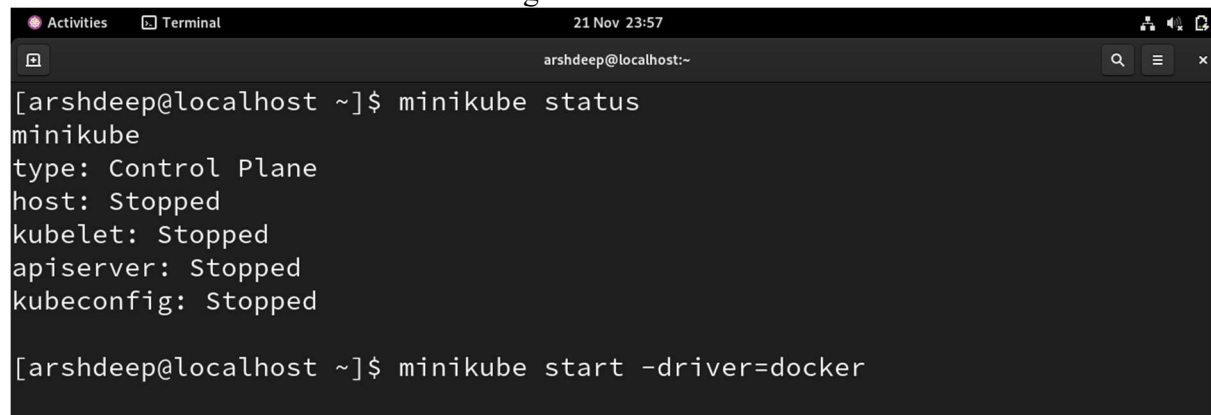
Verifying the deployed pods:

```
[arshdeep@localhost ~]$ helm ls
NAME          NAMESPACE    REVISION    UPDATED                               STATUS    CHART          APP VERSION
my-grafana    default      1           2024-11-23 20:44:42.048521816 +0530 IST deployed grafana-8.6.0 11.3.0
my-mariadb    default      1           2024-11-23 20:42:33.878804745 +0530 IST deployed mariadb-20.0.0 11.4.4

[arshdeep@localhost ~]$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
my-grafana-56896fc78f-wgvjp         1/1    Running   0          71s
my-mariadb-0                         1/1    Running   0          3m19s

[arshdeep@localhost ~]$
```

Command to start minikube cluster using docker driver:



The screenshot shows a terminal window titled "Terminal" with the date and time "21 Nov 23:57". The user is at the prompt "arshdeep@localhost:~". The terminal displays the output of the "minikube status" command, which shows that the Control Plane, kubelet, apiserver, and kubeconfig are all stopped. Below this, the command "minikube start -driver=docker" is entered.

```
[arshdeep@localhost ~]$ minikube status
minikube
type: Control Plane
host: Stopped
kubelet: 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:

← → ↻ localhost:3000/?from=now-6h&to=now&timezone=browser ☆ 🔒 📄 🗑️ ☰

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Welcome to Grafana

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Basic

The steps below will guide you to quickly finish setting up your Grafana installation.

TUTORIAL

[DATA SOURCE AND DASHBOARDS](#)

Grafana fundamentals

Set up and understand Grafana if you have no prior experience. This tutorial guides you through the entire process and covers the "Data source" and "Dashboards" steps to the right.

DATA SOURCES

Add your first data source

[Learn how in the docs](#)

DASHBOARDS

Create your first dashboard

[Learn how in the docs](#)

[Remove this panel](#)

Dashboards

Starred dashboards

Latest from the blog

Nov 21

https://grafana.com/blog/2024/11/21/5-tips-to-write-better-browser-tests-for-performance-testing-and-synthetic-monitoring/?utm_source=grafana_news&utm_medium=rss tests for

Running the robotframe work 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]>
```

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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]$
```