

Step-by-Step Guide to Deploying a Spring Boot Application with Docker and Kubernetes



1. Initialize and Clone the Repository

Initializes a new Git repository.

Clones the Spring Framework PetClinic project from GitHub.

Code:

```
git init
```

```
git clone "https://github.com/AranganathanPrakash/spring-framework-petclinic"
```

2. Navigate to the Project Directory

Moves into the cloned repository folder.

Code:

```
cd spring-framework-petclinic
```

3. Update System Packages

Updates the package list to ensure the latest versions are available.

Code:

```
sudo apt update
```

4. Install Maven

Installs Apache Maven, required for building the Spring Boot application.

Code:

```
sudo apt install maven
```

5. Verify Maven Installation

Checks if Maven is installed correctly and displays the version.

Code:

```
mvn --version
```

6. Run Tests (Optional)

Executes unit tests to ensure the application works correctly.

Code:

```
mvn test
```

7. Clean and Build the Application

mvn clean: Cleans previous builds.

mvn install: Compiles and packages the application.

mvn package: Generates the final JAR/WAR file in the target/ directory.

Code:

```
mvn clean
```

```
mvn install
```

```
mvn package
```

8. Verify the Built Application

Navigates to the target folder where the compiled application is stored.

Code:

```
cd target
```

```
ls
```

```
cd ..
```

9. Login to Docker

Logs into Docker Hub to push container images.

Code:

```
docker login -u sivadeep30
```

10. Build Docker Image

Builds a Docker image with the tag pet from the project directory.

Code:

```
docker build -t pet app
```

11. Tag and Push Image to Docker Hub

Tags the image for Docker Hub.

Pushes the image to your Docker Hub repository.

Code:

```
docker tag petapp sivadeep30/petapp:latest
```

```
docker push sivadeep30/petapp:latest
```

12. Start Minikube

Starts a Minikube cluster for Kubernetes.

Checks if Minikube is running properly.

Code:

```
minikube start
```

```
minikube status
```

13. Verify Kubernetes Nodes

Lists available Kubernetes nodes.

Code:

```
kubectl get nodes
```

14. Deploy the Application on Kubernetes & Expose the Application

Creates a Kubernetes deployment using your Docker image.

Exposes the deployment as a service, making it accessible via Minikube.

Lists all running pods to verify the deployment is successful.

Code:

```
kubectl create deployment petapp --image=sivadeep30/petapp --port=8080
```

```
kubectl expose deployment petapp --port=8080 --type=NodePort
```

```
kubectl get pods
```

15) Access the Application

Opens the application in the browser via Minikube.

Code:

```
minikube service petapp
```

Screenshots:

```

Mar 21 16:10 sivadeep@sivadeep-VivoBook: ~/taskfile/spring-framework-petclinic

sivadeep@sivadeep-VivoBook: $ mkdir taskfile
sivadeep@sivadeep-VivoBook: $ cd taskfile
sivadeep@sivadeep-VivoBook: ~/taskfile$ git --version
git version 2.43.0
sivadeep@sivadeep-VivoBook:~/taskfile$ git clone https://github.com/AranganathanPrakash/spring-framework-petclinic.git
Cloning into 'spring-framework-petclinic'...
remote: Counting objects: 100% (111/111), done.
remote: Compressing objects: 100% (78/78), done.
remote: Total 7351 (delta 1066), reused 1033 (delta 1033), pack-reused 6240 (from 1)
Receiving objects: 100% (7351/7351), 3.12 MiB | 1.98 MiB/s, done.
Resolving deltas: 100% (3609/3609), done.
sivadeep@sivadeep-VivoBook:~/taskfile$ mvn --version
Command 'mvn' not found, but can be installed with:
sudo apt install maven
sivadeep@sivadeep-VivoBook:~/taskfile$ mvn install maven
Command 'mvn' not found, but can be installed with:
sudo apt install maven
sivadeep@sivadeep-VivoBook:~/taskfile$ ^C
[sudo] password for sivadeep:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
libapolliance-java libapache-pom-java libatinject-jsr330-api-java
libcdi-api-java libcommons-cli-java libcommons-io-java libcommons-lang3-java
libcommons-parent-java liberror-prone-java
libgeronimo-annotation-1.3-spec-java libgeronimo-interceptor-3.0-spec-java
libguava-java libguice-java libjansi-java libjsr305-java
libmaven-parent-java libmaven-resolver-java libmaven-shared-utils-java
libmaven3-core-java libplexus-cipher-java libplexus-classworlds-java
libplexus-component-annotations-java libplexus-interpolation-java
libplexus-sec-dispatcher-java libplexus-utils2-java libsisu-inject-java
libsisu-plexus-java libsf4j-java libwagon-file-java
libwagon-http-shaded-java libwagon-provider-api-java
Suggested packages:
libatinject-jsr330-api-java-doc libcommons-io-java-doc libasm-java
libcglib-java libjsr305-java-doc libmaven-shared-utils-java-doc
liblogback-java libplexus-utils2-java-doc junit4 testng
libcommons-logging-java liblog4j1.2-java
The following NEW packages will be installed:
libapolliance-java libapache-pom-java libatinject-jsr330-api-java
libcdi-api-java libcommons-cli-java libcommons-io-java libcommons-lang3-java
libcommons-parent-java liberror-prone-java

sivadeep@sivadeep-VivoBook:~/taskfile$ cd spring-framework-petclinic
Command 'cd' not found, did you mean:
command 'mc'd' from deb mtools (4.0.43-1)
command 'hcd' from deb hfsutils (3.2.6-15build2)
command 'bcd' from deb bsgames (2.17-30)
Try: sudo apt install <deb name>
sivadeep@sivadeep-VivoBook:~/taskfile$ cd spring-framework-petclinic
sivadeep@sivadeep-VivoBook:~/taskfile/spring-framework-petclinic$ mvn test
[INFO] Scanning for projects...
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-bom/2.16.1/jackson-bom-2.16.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/bom/2.16.1/jackson-bom-2.16.1.pom (18 kB at 55 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-parent/2.16/jackson-parent-2.16.pom
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-parent/2.16/jackson-parent-2.16.pom (6.5 kB at 163 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/oss-parent/56/oss-parent-56.pom
Downloaded from central: https://repo.maven.apache.org/maven2/com/fasterxml/oss-parent/56/oss-parent-56.pom (24 kB at 548 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/data/spring-data-bom/2023.1.1/spring-data-bom-2023.1.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/data/spring-data-bom/2023.1.1/spring-data-bom-2023.1.1.pom (5.5 kB at 138 kB/s)
[INFO]
[INFO] -----< org.springframework.samples:spring-framework-petclinic >-----
[INFO] Building Spring Framework PetClinic 6.1.4
[INFO] -----[ war ]-----
Downloaded from central: https://repo.maven.apache.org/maven2/org/jacoco/jacoco-maven-plugin/0.8.11/jacoco-maven-plugin-0.8.11.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/jacoco/jacoco-maven-plugin/0.8.11/jacoco-maven-plugin-0.8.11.pom (4.2 kB at 121 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/jacoco/org.jacoco.build/0.8.11/org.jacoco.build-0.8.11.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/jacoco/org.jacoco.build/0.8.11/org.jacoco.build-0.8.11.pom (44 kB at 995 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-bom/9.6/asm-bom-9.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-bom/9.6/asm-bom-9.6.pom (3.2 kB at 90 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/ow2/1.5.1/ow2-1.5.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/ow2/1.5.1/ow2-1.5.1.pom (11 kB at 323 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/jacoco/jacoco-maven-plugin/0.8.11/jacoco-maven-plugin-0.8.11.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/jacoco/jacoco-maven-plugin/0.8.11/jacoco-maven-plugin-0.8.11.jar (57 kB at 1.3 MB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/nexus/plugins/maven-enforcer-plugin/3.4.1/maven-enforcer-plugin-3.4.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/nexus/plugins/maven-enforcer-plugin/3.4.1/maven-enforcer-plugin-3.4.1.pom (7.7 kB at 228 kB/s)

```

```

[sivadeep@sivadeep-VivoBook:~/taskfile/spring-framework-petclinic]$ mvn clean
[INFO] Scanning for projects...
[INFO] [-----< org.springframework.samples:spring-framework-petclinic >-----]
[INFO] Building Spring Framework PetClinic 6.1.4
[INFO] [-----[ war ]-----]
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom (3.9 kB at 2.1 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom (13 kB at 124 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom (13 kB at 329 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/21/maven-parent-21.pom (26 kB at 84 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10.pom (15 kB at 322 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10.pom (15 kB at 322 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar (25 kB at 84 kB/s)
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ spring-framework-petclinic ---
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.pom (1.5 kB at 38 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/2.0.6/maven-parent-2.0.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/21/maven-parent-21.pom (9.0 kB at 197 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent-5/maven-parent-5.pom (15 kB at 346 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/3/apache-3.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/3/apache-3.pom (3.4 kB at 98 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.pom (4.1 kB at 120 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/sonatype/spice/spice-parent/16/spice-parent-16.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/sonatype/spice/spice-parent-16.pom (8.4 kB at 27 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.jar (13 kB at 218 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.jar (226 kB at 1.9 MB/s)
[INFO] Deleting /home/sivadeep/taskfile/spring-framework-petclinic/target
[INFO] [-----]
[INFO] BUILD SUCCESS
[INFO] [-----]
[INFO] Total time: 3.530 s
[INFO] Finished at: 2025-03-21T15:16:34+05:30
[INFO] [-----]
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.jar (230 kB at 1.0 MB/s)
[INFO] Installing /home/sivadeep/taskfile/spring-framework-petclinic/target/petclinic.war to /home/sivadeep/.m2/repository/org/springframework/samples/spring-framework-petclinic/6.1.4/war
[INFO] Installing /home/sivadeep/taskfile/spring-framework-petclinic/pom.xml to /home/sivadeep/.m2/repository/org/springframework/samples/spring-framework-petclinic/6.1.4/pom.xml
[INFO] [-----]
[INFO] BUILD SUCCESS
[INFO] [-----]
[INFO] Total time: 24.728 s
[INFO] Finished at: 2025-03-21T15:17:11+05:30
[INFO] [-----]
sivadeep@sivadeep-VivoBook:~/taskfile/spring-framework-petclinic$ mvn package
[INFO] Scanning for projects...
[INFO]
[INFO] [-----< org.springframework.samples:spring-framework-petclinic >-----]
[INFO] Building Spring Framework PetClinic 6.1.4
[INFO] [-----[ war ]-----]
[INFO]
[INFO] --- maven-enforcer-plugin:3.4.1:enforce (enforce-maven) @ spring-framework-petclinic ---
[INFO] Rule 0: org.apache.maven.enforcer.rules.RequireMavenVersion passed
[INFO]
[INFO] --- jacoco-maven-plugin:0.8.11:prepare-agent (prepare-agent) @ spring-framework-petclinic ---
[INFO] argline set to -javaagent:/home/sivadeep/.m2/repository/org/jacoco/org.jacoco.agent-0.8.11-runtime.jar=destfile=/home/sivadeep/taskfile/petclinic/target/jacoco.exec
[INFO]
[INFO] --- maven-resources-plugin:3.3.1:resources (default-resources) @ spring-framework-petclinic ---
[INFO] Copying 21 resources from src/main/resources to target/classes
[INFO]
[INFO] --- maven-compiler-plugin:3.11.0:compile (default-compile) @ spring-framework-petclinic ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:3.3.1:testResources (default-testResources) @ spring-framework-petclinic ---
[INFO] Copying 11 resources from src/test/java to target/test-classes
[INFO] Copying 1 resource from src/test/resources to target/test-classes
[INFO]
[INFO] --- maven-compiler-plugin:3.11.0:testCompile (default-testCompile) @ spring-framework-petclinic ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:3.2.3:test (default-test) @ spring-framework-petclinic ---
[INFO] Using auto detected provider org.apache.maven.surefire.junitplatform.JUnitPlatformProvider
[INFO]
[INFO] [-----]
[INFO] T E S T S
[INFO]

```

```
sivadeep@sivadeep-Vivoobook:~/taskfile/spring-framework-petclinic$ docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/
Username: sivadeepcse@gmail.com
Password:
WARNING! Your password will be stored unencrypted in /home/sivadeep/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
sivadeep@sivadeep-Vivoobook:~/taskfile/spring-framework-petclinic$ docker push sivadeep30/springboot
Using default tag: latest
The push refers to repository [docker.io/sivadeep30/springboot]
f2da7b44ecf1: Pushed
5f70bf18a086: Mounted from library/tomcat
6fbfd02a6a33: Mounted from library/tomcat
49cb1bc2daeb: Mounted from library/tomcat
4e5b554b7345: Mounted from library/tomcat
39cf9ac89a5a: Mounted from library/tomcat
f844dcf94898: Mounted from library/tomcat
3359bc3d7a6a: Mounted from library/tomcat
4b7c91ed9534: Mounted from library/tomcat
latest: digest: sha256:daaec6ee526650a0957d98324d323c700ff2d6b0249daf4326ef37dd25e31bc size: 2413

sivadeep@sivadeep-Vivoobook:~/taskfile/spring-framework-petclinic$ docker build -t petapp .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
  Install the buildx component to build images with BuildKit:
    https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 101MB
Step 1/4 : FROM tomcat:latest
latest: Pulling from library/tomcat
5a7813e071bf: Pull complete
8dbbbc6af9dc: Pull complete
a10be847b9f1: Pull complete
dcc1c5ea3c7d: Pull complete
91e6cc55403a: Pull complete
5d4660d0a9e9: Pull complete
4f4fb700ef54: Pull complete
e231914ca483: Pull complete
Digest: sha256:1374as565d5122fdb42807f3a5f2d4fcc245a5e15420ff5bb5123afedc8ef769d
Status: Downloaded newer image for tomcat:latest
--> 88b0ficeee84c
Step 2/4 : COPY target/*.war /usr/local/tomcat/webapps/ROOT.war
--> 4c5a41d39448
Step 3/4 : EXPOSE 8080
--> Running in 071541e9649c
--> Removed intermediate container 071541e9649c
--> 847d81a434c0
Step 4/4 : CMD ["catalina.sh", "run"]
--> Running in 383f4a653a71
--> Removed intermediate container 383f4a653a71
--> 3e3dace60efb
Successfully built 3e3dace60efb
Successfully tagged petapp:latest

sivadeep@sivadeep-Vivoobook:~/taskfile/spring-framework-petclinic$ mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.springframework.samples:spring-framework-petclinic >-----
[INFO] Building Spring Framework Petclinic 6.1.4
[INFO] -----[ war ]-----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ spring-framework-petclinic ---
[INFO]
[INFO] --- maven-enforcer-plugin:3.4.1:enforce (enforce-maven) @ spring-framework-petclinic ---
[INFO] Rule 0: org.apache.maven.enforcer.rules.version.RequireMavenVersion passed
[INFO]
[INFO] --- jacoco-maven-plugin:0.8.11:prepare-agent (prepare-agent) @ spring-framework-petclinic ---
[INFO] argline set to -javaagent:/home/sivadeep/.m2/repository/org/jacoco/org.jacoco.agent-0.8.11-runtime.jar=destfile=/home/sivadeep/petclinic/target/jacoco.exec
[INFO]
[INFO] --- maven-resources-plugin:3.3.1:resources (default-resources) @ spring-framework-petclinic ---
[INFO] Copying 21 resources from src/main/resources to target/classes
[INFO]
[INFO] --- maven-compiler-plugin:3.11.0:compile (default-compile) @ spring-framework-petclinic ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 47 source files with javac [debug target 17] to target/classes
[WARNING] system.modules path not set in conjunction with -source 17
[INFO]
[INFO] --- maven-resources-plugin:3.3.1:testResources (default-testResources) @ spring-framework-petclinic ---
[INFO] Copying 11 resources from src/test/java to target/test-classes
[INFO] Copying 1 resource from src/test/resources to target/test-classes
[INFO]
[INFO] --- maven-compiler-plugin:3.11.0:testCompile (default-testCompile) @ spring-framework-petclinic ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 11 source files with javac [debug target 17] to target/test-classes
[WARNING] system.modules path not set in conjunction with -source 17
[INFO]
[INFO] --- maven-surefire-plugin:3.2.3:test (default-test) @ spring-framework-petclinic ---
[INFO] Using auto detected provider org.apache.maven.surefire.junitplatform.JUnitPlatformProvider
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running org.springframework.samples.petclinic.web.VisitControllerTests
```

The screenshot shows a Linux desktop environment with a terminal window and a web browser window.

Docker Hub Repository Page:

- Left Sidebar:** Shows a sidebar with various icons for Docker, Git, and other tools.
- Main Content:**
 - Repository Overview:** Shows a summary of the repository, including a "Tags" section with an "INCOMPLETE" status and a note that "pushed images appear here".
 - Buildcloud Integration:** A sidebar with the "buildcloud" logo and a link to "Docker Build Cloud". It describes accelerating image build times with access to cloud-based builders and shared cache.

Terminal Session:

```
sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ docker run -d -p 8080:8080 --name my-spring_container petapp
38d2c69f17c10dd6bd3d239f40db5817320a4abe712e7e65d58cb182285ac68
sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ sudo docker ps
[sudo] password for sivadeep:
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
38d2c69f17c1 petapp "catalina.sh run" 45 minutes ago Up 45 minutes 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp my-spring_container
sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ ^C
sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ sudo docker stop 38d2c69f17c1
38d2c69f17c1

sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ minikube start
😄 minikube v1.35.0 on Ubuntu 24.04
💡 Using the docker driver based on existing profile
👍 Starting "minikube" primary control-plane node in "minikube" cluster
🌐 Pulling base image v0.0.46 ...
🕒 Restarting existing docker container for "minikube" ...
🌐 Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
🌐 Verifying Kubernetes components...
    └─ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟 Enabled addons: storage-provisioner, default-storageclass
🌟 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default

sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ kubectl get pods
NAME READY STATUS RESTARTS AGE
myapp-757c876dcf-d5kj9 1/1 Running 1 (22h ago) 23h
petapp-66678659c4-n56vp 1/1 Running 0 2m21s
sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ kubectl create deployment petapp1 --image=sivadeep30/springboot
deployment.apps/petapp1 created
sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ kubectl expose deployment petapp1 --type=NodePort --port=8080
service/petapp1 exposed
sivadeep@sivadeep-Vivobook:~/taskfile/spring-framework-petclinic$ minikube service petapp1 --url
http://192.168.49.2:32576
```

