How to host a Spring Boot application for free with Render

Generate a spring boot project to deploy!

- Create a java spring boot application
- Add dependencies
- Lombok
- Spring web
- Spring dev tools
- Spring data mongodb

Example Project

Create a data model

Country.java

```java
package com.hostingtutorials.demo;

import lombok.AllArgsConstructor;
import lombok.Data;

@Data
@AllArgsConstructor
public class Country {
    private String name;
    private String capital;
    private int population;
}
```

Create a controller.

RestController.java

```java
package com.hostingtutorials.demo;

import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;

import java.util.List;

@RestController
@RequestMapping("api/v1/cities")
public class RestEndpoint {
    private static final List<Country> COUNTRIES = List.of(
            new Country("United States of America", "Washington D.C.", 339_996_563),
            new Country("China", "Beijing", 1_411_750_000),
            new Country("India", "New Delhi", 1_428_627_663)
    );

    @GetMapping
    public List<Country> getCountries(){
        return COUNTRIES;
    }
}
```

Packaging the application

Now we want to turn our Spring Boot application into an executable JAR file.

Command for packaging with Maven

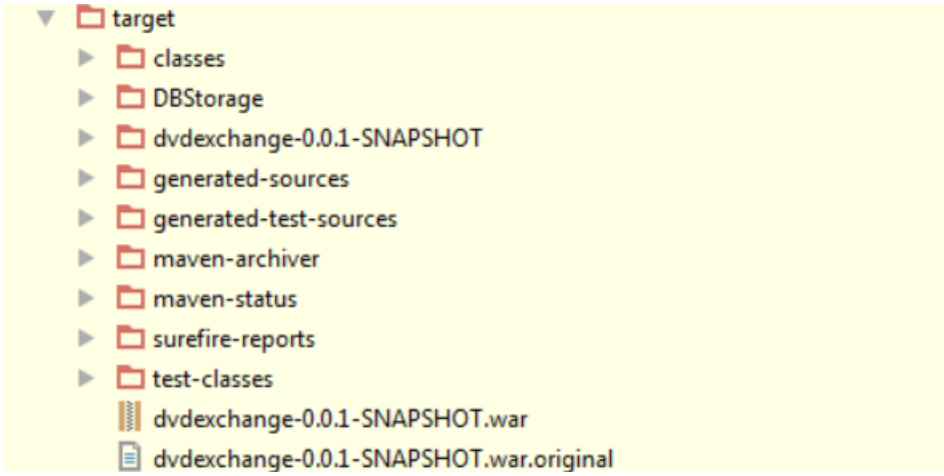
> ./mvn clean package

Command for packaging with Maven

- gradle build

This command will generate a jar file in folder Target with the name

(application_name -0.0.1-SNAPSHOT.jar)



Testing jar file

Run the file using this command

- java -jar build/libs/ application_name -0.0.1-SNAPSHOT.jar

Create a Dockerfile

Maven:

Dockerfile

```
FROM eclipse-temurin:17-jdk-alpine
VOLUME /tmp
COPY target/*.jar app.jar
ENTRYPOINT ["java","-jar","/app.jar"]
```

Gradle:

Dockerfile

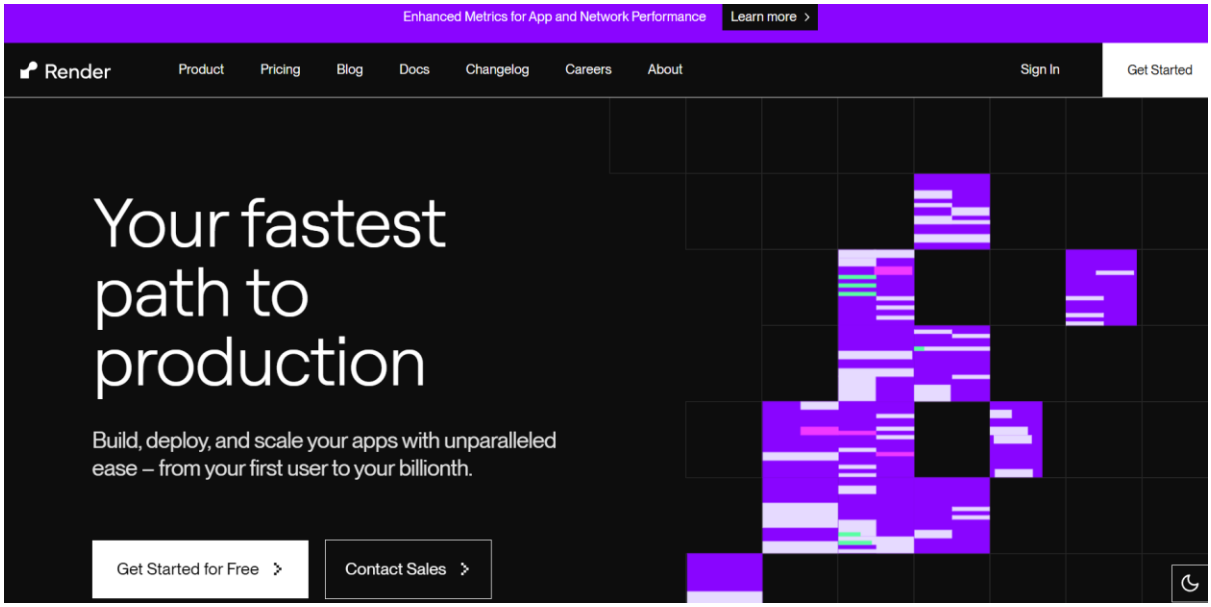
```
FROM azul/zulu-openjdk:17-latest
VOLUME /tmp
COPY build/libs/*.jar app.jar
ENTRYPOINT ["java","-jar","/app.jar"]
```

Uploading Project

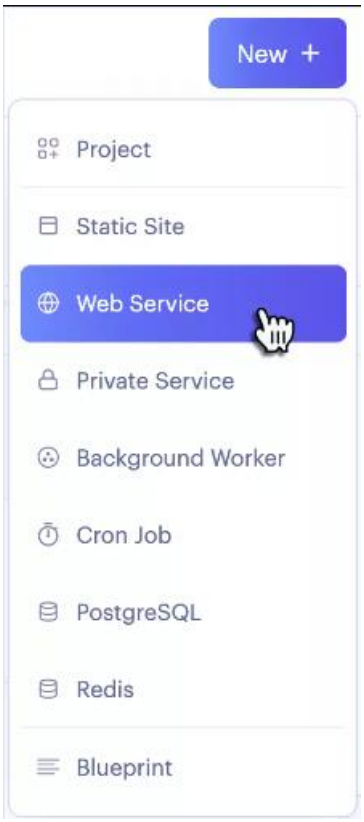
Upload your project to git hub repository

Hosting application on render.com

- Go to render.com

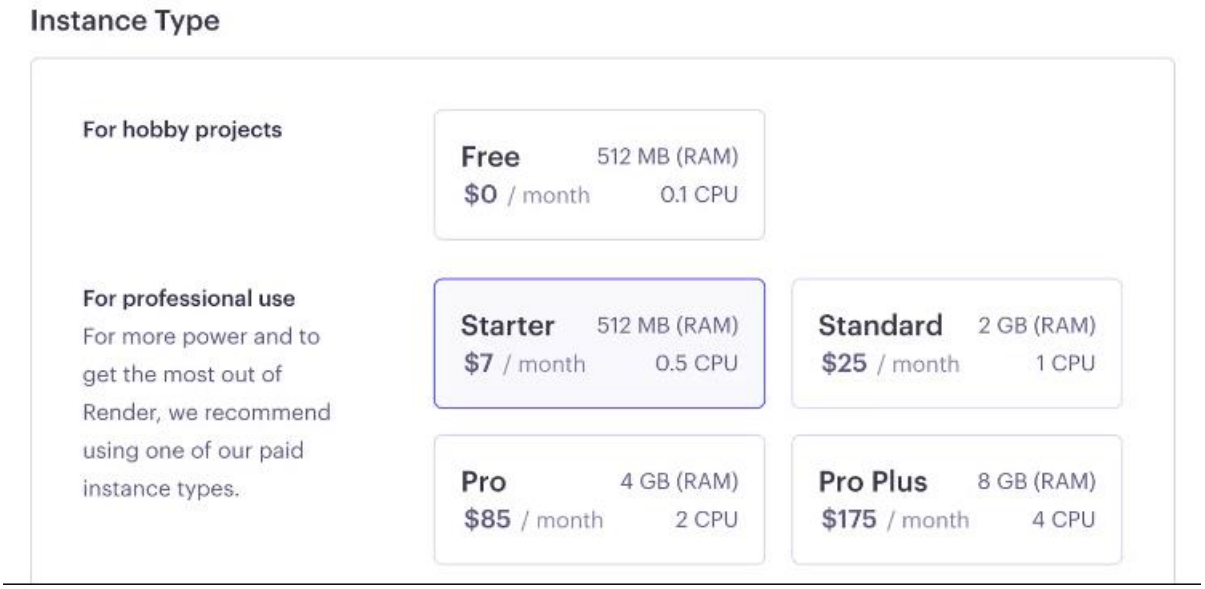


- Create account
- Select get started for free
- From the Render Dashboard, click New > Web Service:



- Choose Build and deploy from a Git repository and click Next.

- choose an instance type to run your service on: (select free)



- Click Create Web Service. Render kicks off your service's first build and deploy.
- After application is deployed successfully you'll get a base URL for you application .later you can add end point to call your own API .