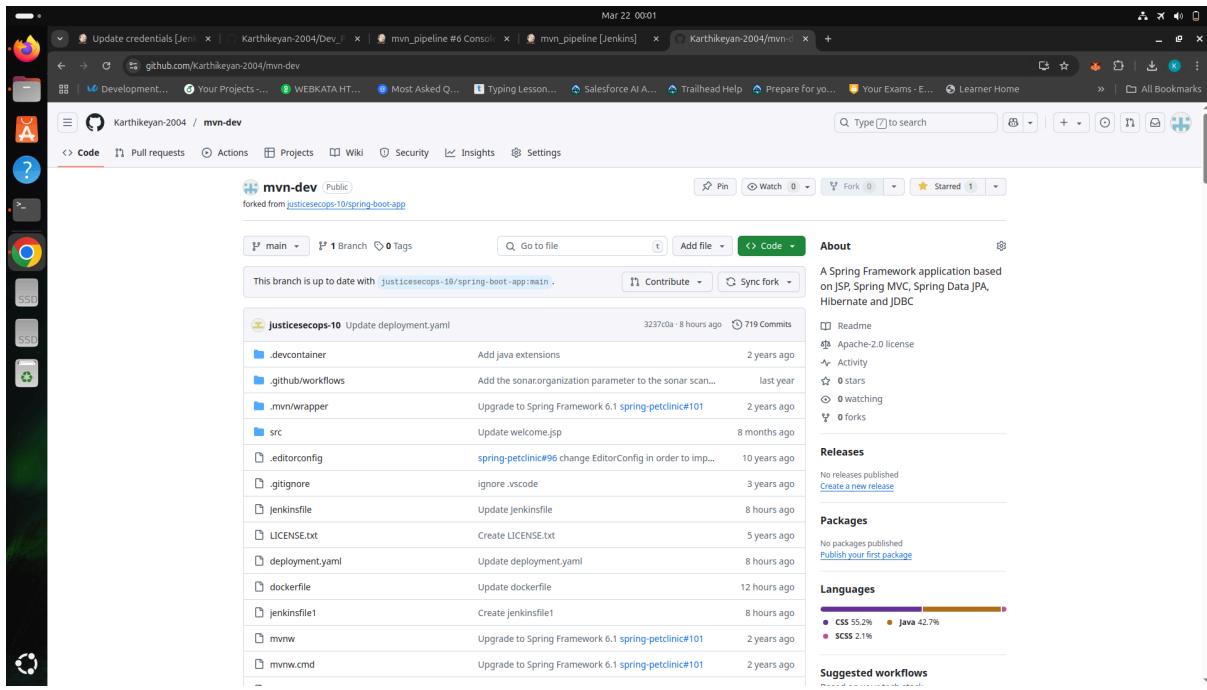


Spring Boot with Maven & Tomcat in Docker

<https://github.com/Karthikeyan-2004/mvn-dev>



Plugins:

Maven Integration plugin
Pipeline Maven plugin

Tools:

Use maven 3.9.8
and Maven Home as /opt/home

Configure - pipeline:

```
pipeline {
    agent any
    environment {
        DOCKER_IMAGE = "karthikeyanr17/mvn"
        DOCKER_TAG = "latest"
        DOCKER_CREDENTIALS_ID = "docker"
        GITHUB_CREDENTIALS_ID = "github_seccred"
        KUBECONFIG = "/var/lib/jenkins/.kube/config"
```

```

        MAVEN_HOME = "/opt/maven" // Set the correct Maven path
    }

stages {
    stage('Checkout Code') {
        steps {
            git credentialsId: GITHUB_CREDENTIALS_ID, url:
'https://github.com/karthikeyan-2004/mvn-dev.git', branch: 'main'
        }
    }

    stage('Build Application') {
        steps {
            script {
                sh "${MAVEN_HOME}/bin/mvn clean package -DskipTests"
            }
        }
    }

    stage('Run Maven Tests') {
        steps {
            script {
                catchError(buildResult: 'SUCCESS', stageResult: 'FAILURE') {
                    sh "${MAVEN_HOME}/bin/mvn test"
                }
            }
        }
    }

    stage('Build Docker Image') {
        steps {
            script {
                sh "docker build -t ${DOCKER_IMAGE}:${DOCKER_TAG} ."
            }
        }
    }

    stage('Push Docker Image') {
        steps {
            withDockerRegistry([credentialsId: DOCKER_CREDENTIALS_ID, url: ""]){
                sh "docker push ${DOCKER_IMAGE}:${DOCKER_TAG}"
            }
        }
    }

// Uncomment this stage when Kubernetes deployment is ready
// stage('Deploy to Kubernetes') {
// steps {

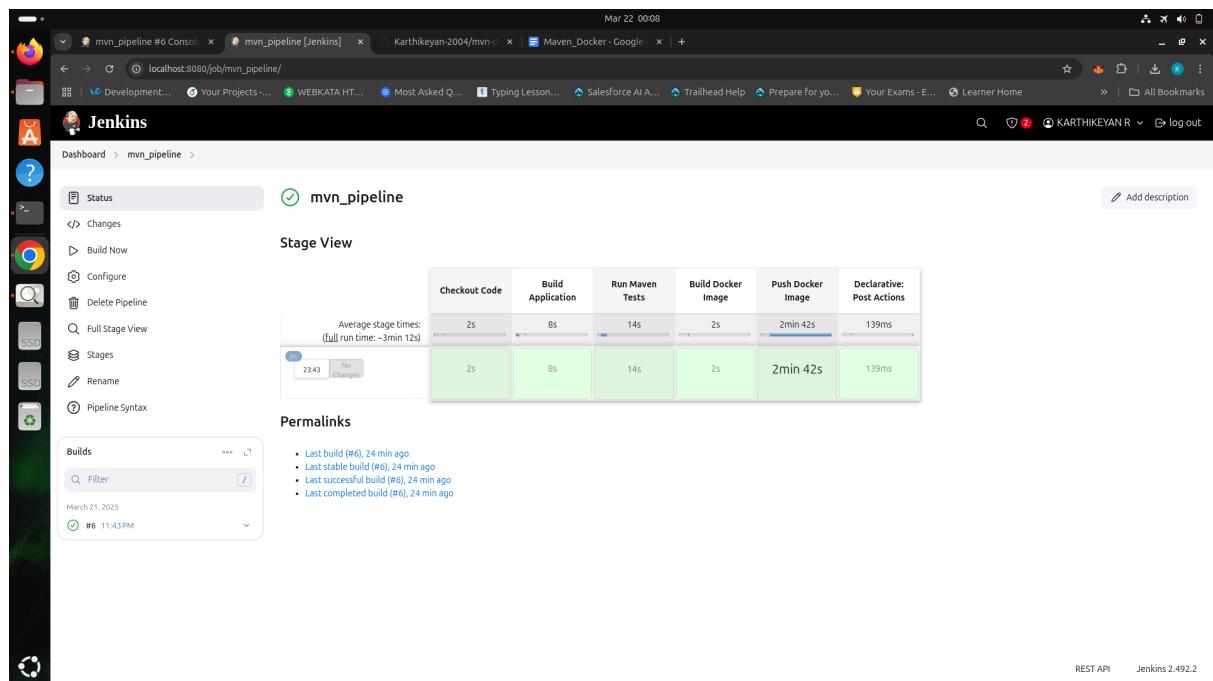
```

```

// script {
// sh ""
// chmod +x scripts/deploy.sh
// ./scripts/deploy.sh
// "
// }
// }
// }

post {
    success {
        echo "✅ Deployment Successful!"
    }
    failure {
        echo "❌ Deployment Failed!"
    }
}
}

```



```

Mar 21 23:47
Update credentials [Jen... | Karthikeyan-204/Dev_... | mvn_pipeline [Jenkins] | mvn_pipeline #6 Consol... | Karthikeyan-204/mvn-d...
Dashboard > mvn_pipeline > #6
3359bf3d7a6a: Preparing
4b7c01ed0534: Preparing
f844dcf94899: Waiting
3359bf3d7a6a: Waiting
4b7c01ed0534: Waiting
39cf9ac8995a: Waiting
49cb1bc2ddeb: Layer already exists
4e5b55407345: Layer already exists
5f70bf18a860: Layer already exists
39cf9ac8995a: Layer already exists
f844dcf94899: Layer already exists
3359bf3d7a6a: Layer already exists
4b7c01ed0534: Layer already exists
6fbdf02a6a33: Pushed
fd1a7d727557: Pushed
latest: digest: sha256:432ba36fb9096f96748b7011912f3aec4c7453132383693e4f4259045dd8789d size: 2413
[Pipeline]
[Pipeline] // withDockerRegistry
[Pipeline]
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
[✓] Deployment Successful!
[Pipeline]
[Pipeline] // stage
[Pipeline]
[Pipeline] // withEnv
[Pipeline]
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

```

REST API Jenkins 2.492.2

#6 (Mar 21, 2025, 11:43:32 PM)

Started by user KARTHIKEYAN R

This run spent:

- 12 ms waiting;
- 3 min 12 sec build duration;
- 3 min 12 sec total from scheduled to completion.

git

Revision: 3237c0ab0bd3ae4ec0d01195572ed76ca2ff7f74
Repository: https://github.com/karthikeyan-204/mvn-dev.git
refs/remotes/origin/main

No changes.

Restart From Stage

Replay

Pipeline Steps

Workspaces

localhost:8080/job/mvn_pipeline/6/restart

REST API Jenkins 2.492.2

After build:

```

docker ps -a
docker run -it karthikeyanr17/mvn:latest /bin/bash

```

```

root@f5c4f8921dbf:/usr/local/tomcat# ps aux | grep tomcat
root@f5c4f8921dbf:/usr/local/tomcat# /usr/local/tomcat/bin/catalina.sh run

```

```

karthi@karthi-HP-Pavilion-Laptop-14-ec1xxx:~/Desktop/mvn-dev
kartikeyanr17@karthi-HP-Pavilion-Laptop-14-ec1xxx:~/Desktop/mvn-dev$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
8a895a2073a5 karthikeyanr17/project:latest "docker-entrypoint.s..." 21 minutes ago Up 21 minutes 0.0.0.0:9090->3000/tcp, :::9090->3000/tcp devops_container
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
214934a774a gcr.io/k8s-minikube/kicbase:v0.0.46 "/usr/local/bin/entr..." 2 days ago Exited (130) 6 hours ago minikube
karthi@karthi-HP-Pavilion-Laptop-14-ec1xxx:~/Desktop/mvn-dev$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
root@5cfa8f921df:~/usr/local/tomcat# ps aux | grep tomcat
root 10 0.0 6544 2268 pts/0 S+ 18:22 0:00 grep --color=auto tomcat
root@5cfa8f921df:~/usr/local/tomcat# docker run -it karthikeyanr17/mvn:latest /bin/bash
bash: docker: command not found
root@5cfa8f921df:~/usr/local/tomcat# /usr/local/tomcat/bin/catalina.sh run
Using CATALINA_BASE: /usr/local/tomcat
Using CATALINA_HOME: /usr/local/tomcat
Using CATALINA_TMPDIR: /usr/local/tomcat/temp
Using JRE_HOME: /opt/java/openjdk
Using CLASSPATH: /usr/local/tomcat/bin/bootstrap.jar:/usr/local/tomcat/bin/tomcat-juli.jar
Using CATALINA_OPTS:
21-Mar-2025 10:25:14.600 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server version name: Apache Tomcat/11.0.5
21-Mar-2025 10:25:14.607 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server built: Feb 28 2025 15:54:41 UTC
21-Mar-2025 10:25:14.607 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server version number: 11.0.5.0
21-Mar-2025 10:25:14.607 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log OS Name: Linux
21-Mar-2025 10:25:14.607 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log OS Version: 6.11.0-19-generic
21-Mar-2025 10:25:14.607 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Architecture: amd64
21-Mar-2025 10:25:14.608 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Java Home: /opt/java/openjdk
21-Mar-2025 10:25:14.608 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log JVM Version: 21.0.6+7-LTS
21-Mar-2025 10:25:14.608 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log JVM Vendor: Eclipse Adoptium
21-Mar-2025 10:25:14.608 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log CATALINA_BASE: /usr/local/tomcat
21-Mar-2025 10:25:14.608 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log CATALINA_HOME: /usr/local/tomcat
21-Mar-2025 10:25:14.633 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Djava.util.logging.config.file=/usr/local/tomcat/conf/logging.properties
21-Mar-2025 10:25:14.634 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager
21-Mar-2025 10:25:14.634 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Djdk.tls.ephemeralDHKeySize=2048
21-Mar-2025 10:25:14.634 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Dorg.apache.catalina.security.SecurityListener.UMASK=0027
21-Mar-2025 10:25:14.634 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -add-opens=java.base/java.lang=ALL-UNNAMED
21-Mar-2025 10:25:14.634 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -add-opens=java.base/java.lang.reflect=ALL-UNNAMED
21-Mar-2025 10:25:14.634 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -add-opens=java.base/java.io=ALL-UNNAMED
21-Mar-2025 10:25:14.634 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -add-opens=java.base/java.util=ALL-UNNAMED
21-Mar-2025 10:25:14.635 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -add-opens=java.base/java.util.concurrent=ALL-UNNAMED

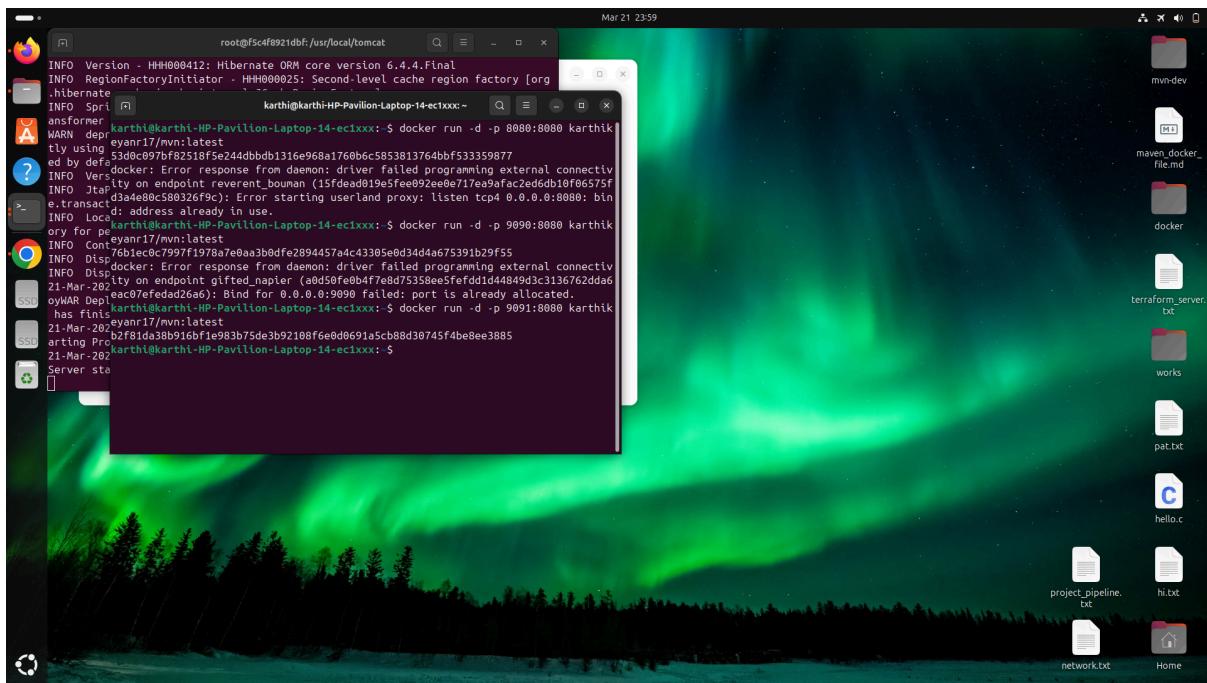
```

```

karthi@karthi-HP-Pavilion-Laptop-14-ec1xxx:~/Desktop/mvn-dev
karthi@karthi-HP-Pavilion-Laptop-14-ec1xxx:~/Desktop/mvn-dev$ docker run -d -p 9091:8080 karthikeyanr17/mvn:latest
21-Mar-2025 18:25:14.635 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Dcatalina.base=/usr/local/tomcat
21-Mar-2025 18:25:14.636 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Dcatalina.home=/usr/local/tomcat
21-Mar-2025 18:25:14.641 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Djava.io.tmpdir=/usr/local/tomcat/temp
21-Mar-2025 18:25:14.641 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Djava.io.tmpdir=/usr/local/tomcat/temp
21-Mar-2025 18:25:15.059 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Catalina Native library [2.8.8] using APR version [1.7.2].
21-Mar-2025 18:25:15.092 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Catalina successfully initialized [OpenSSL 3.0.13 30 Jan 2024]
21-Mar-2025 18:25:15.145 INFO [main] org.apache.catalina.startup.Catalina.load Service Initialization in [717] milliseconds
21-Mar-2025 18:25:15.145 INFO [main] org.apache.catalina.core.StandardService.startInternal Starting service [Catalina]
21-Mar-2025 18:25:15.145 INFO [main] org.apache.catalina.core.StandardService.startInternal Starting service engine: [Apache Tomcat/11.0.5]
21-Mar-2025 18:25:15.145 INFO [main] org.apache.catalina.core.StandardEngine.startInternal Deploying web application archive [/usr/local/tomcat/webapps/ROOT.war]
21-Mar-2025 18:25:17.916 INFO [main] org.apache.jasper.JasperScanner.scanJars At least one JAR was scanned for RIDs yet contained no TIDs. Enable debug logging for this logger for a complete list of JARs that were scanned but no TIDs were found in them. Skipping unneeded JARs during scanning can improve startup time and JSP compilation time.
INFO ContextLoader - Root WebApplicationContext: initialization started
INFO LogHelper - HHH0000204: Processing PersistenceUnitInfo [name=petclinic]
INFO Version - HHH000412: Hibernate ORM core version 6.4.4.Final
INFO RegionFactoryInitiated - HHH000025: Second-level cache region factory [org.hibernate.cache.jcache.internal.JCacheRegionFactory]
INFO SpringPersistenceUnitInfo - No LoadTimeWeaver setup; ignoring JPA class transformer
SSSEWARN deprecation - HHH00000025: H2ialect does not need to be specified explicitly using 'hibernate.dialect' (remove the property setting and it will be selected by default)
INFO Version - HHH000001: Hibernate Validator 6.0.1.Final
INFO JtaPlatformInitiator - HHH000489: No JTA platform available (set 'hibernate.transaction.jta.platform' to enable JTA platform integration)
INFO LocalContainerEntityManagerFactoryBean - Initialized JPA EntityManagerFactory for persistence unit 'petclinic'
INFO ContextLoader - Root WebApplicationContext initialized in 4408 ms
INFO DispatcherServlet - Initializing Servlet 'dispatcher'
INFO DispatcherServlet - Completed initialization in 699 ms
21-Mar-2025 18:25:23.362 INFO [main] org.apache.catalina.startup.HostConfig.deployWAR Deployment of web application archive [/usr/local/tomcat/webapps/ROOT.war] has finished in [8,183] ms
21-Mar-2025 18:25:23.365 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["http-nio-8080"]
21-Mar-2025 18:25:23.379 INFO [main] org.apache.catalina.startup.Catalina.start Server startup in [8284] milliseconds
21-Mar-2025 18:29:56.732 INFO [Thread-2] org.apache.catalina.core.StandardService.stopInternal Stopping service [Catalina]
INFO LocalContainerEntityManagerFactoryBean - Closing JPA EntityManagerFactory for persistence unit 'petclinic'
WARN cache - HHH00001002: Attempt to restop an already stopped JCacheRegionFactory
21-Mar-2025 18:29:56.810 WARNING [Thread-2] org.apache.catalina.loader.WebappClassLoaderBase.clearReferencesJdbc The web application [ROOT] registered the JDBC driver [org.h2.Driver] but failed to unregister it when the web application was stopped. To prevent a memory leak, the JDBC Driver has been forcibly unregistered.
21-Mar-2025 18:29:56.811 WARNING [Thread-2] org.apache.catalina.loader.WebappClassLoaderBase.clearReferencesThreads The web application [ROOT] appears to have started a thread named [tomcat JDBC Pool Cleaner[1942828992:1742581520033]] but has failed to stop it. This is very likely to create a memory leak. Stack trace of thread:
java.base/java.lang.Object.wait0(Native Method)
java.base/java.lang.Object.wait(Objec...:366)
java.base/java.util.TimerThread.mainLoop(Timer.java:563)
java.base/java.util.TimerThread.run(Timer.java:516)
21-Mar-2025 18:29:56.820 INFO [Thread-2] org.apache.coyote.AbstractProtocol.stop Stopping ProtocolHandler ["http-nio-8080"]
21-Mar-2025 18:29:56.824 INFO [Thread-2] org.apache.coyote.AbstractProtocol.destroy Destroying ProtocolHandler ["http-nio-8080"]
root@5cfa8f921df:~/usr/local/tomcat# exit
karthi@karthi-HP-Pavilion-Laptop-14-ec1xxx:~/Desktop/mvn-dev

```

In new terminal - docker run -d -p 9091:8080 karthikeyanr17/mvn:latest



<https://localhost:9091>

