

Java Application Deployment on Ubuntu (Using Maven + Tomcat)

This guide provides a step-by-step process to deploy a Java-based application using Maven and Apache Tomcat on an Ubuntu server.

Assumptions:

- You are using an Ubuntu Server.
- The Java application source code is hosted on GitHub.

Step 1: Update the Server

```
sudo apt update && sudo apt upgrade -y
```

Step 2: Install Java (OpenJDK)

```
sudo apt install openjdk-17-jdk -y
```

```
java -version
```

Step 3: Install Maven

```
sudo apt install maven -y
```

```
mvn -version
```

Step 4: Clone Your Java Project

```
sudo git clone https://github.com/daniyel7devops/docker-Java-kubernetes-project.git
```

```
cd docker-Java-kubernetes-project
```

Step 5: Build the Project Using Maven

```
mvn clean install -DskipTests
```

```
cd target
```

Step 6: Install Tomcat

```
cd /tmp
```

```
wget https://downloads.apache.org/tomcat/tomcat-10/v10.1.20/bin/apache-tomcat-10.1.20.tar.gz
```

```
sudo mkdir /opt/tomcat
```

```
sudo tar -xzf apache-tomcat-10.1.20.tar.gz -C /opt/tomcat --strip-components=1
```

Step 7: Set Permissions

```
sudo chown -R tomcat: /opt/tomcat
```

```
sudo chmod +x /opt/tomcat/bin/*.sh
```

Step 8: Create Tomcat as a systemd Service

Edit /etc/systemd/system/tomcat.service with proper configuration.

Step 9: Reload Systemd & Start Tomcat

```
sudo systemctl daemon-reload
```

```
sudo systemctl enable tomcat
```

```
sudo systemctl start tomcat
```

Step 10: Add Tomcat Manager User and Allow Remote Access

Edit /opt/tomcat/conf/tomcat-users.xml and /opt/tomcat/webapps/manager/META-INF/context.xml

Step 11: Deploy the .war File

```
sudo cp /path/to/your-app.war /opt/tomcat/webapps/
```

Access it at:

<http://<your-server-ip>:8080/your-app>

Deployment Output Screenshot:

Welcome to the Docker Java Shopfront!

Please select a product!

Product Num	SKU	Name	Description	Price £	Qty Available
1	default	Widget	Premium ACME Widgets	1.20	999
2	default	Sprocket	Grade B sprockets	4.10	999
3	default	Anvil	Large Anvils	45.50	999
4	default	Cogs	Grade Y cogs	1.80	999
5	default	Multitool	Multitools	154.10	999

