



I.E.S Jacarandá

Despliegue de Aplicaciones Web

Guía de instalación de un contenedor Tomcat

Profesor: Manuel García Blanca
Rodríguez

Autora: Nadia Lia Correa Morales

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Instalación de un contenedor Tomcat

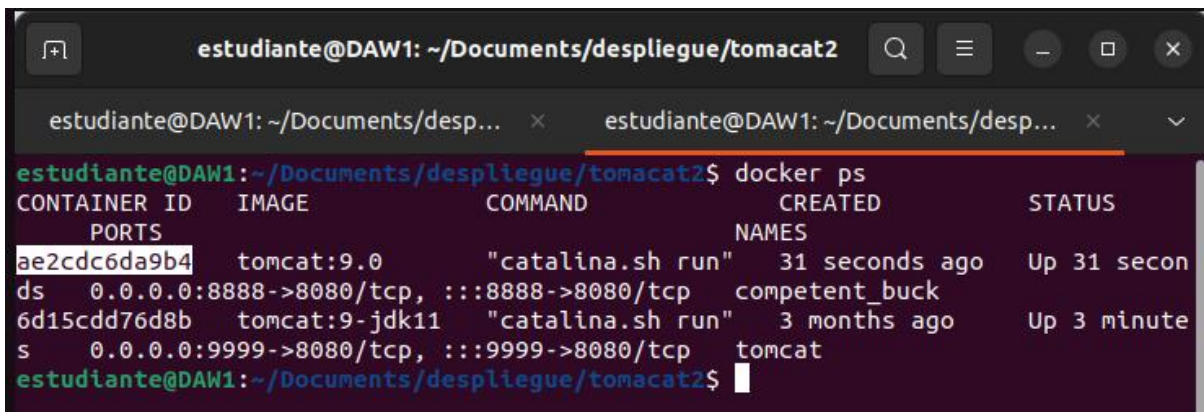
1. Abre una terminal y ejecuta el siguiente comando para levantar el contenedor de Tomcat

docker run -it -p 8888:8080 tomcat:9.0

```
estudiante@DAW1:~$ docker run -it -p 8888:8080 tomcat:9.0
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:
NOTE: Picked up JDK_JAVA_OPTIONS:  --add-opens=java.base/java.lang=ALL-UNNAMED -
--add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.base/java.util=ALL-UNN
AMED --add-opens=java.base/java.util.concurrent=ALL-UNNAMED --add-opens=java.rmi
```

2. Ahora abre una segunda terminal ejecuta el comando para obtener el ID del contenedor

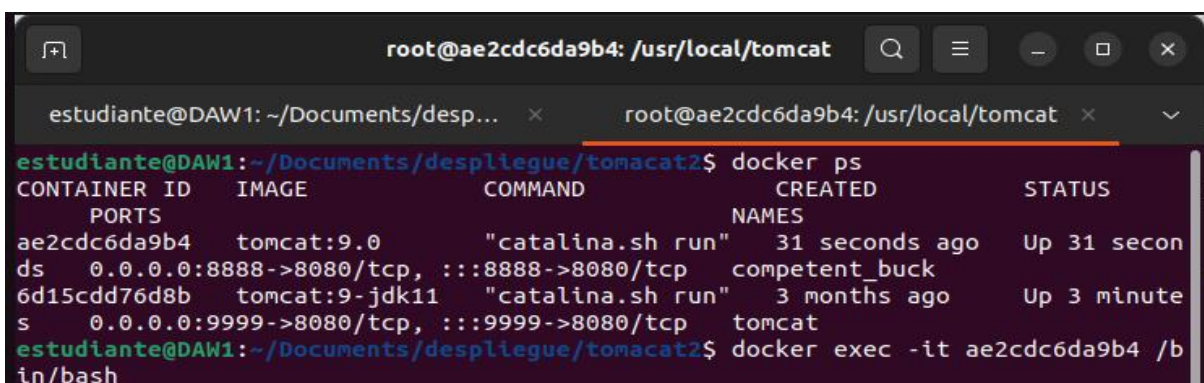
docker ps



```
estudiante@DAW1: ~/Documents/despliegue/tomacat2$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS
PORTS         NAMES
ae2cdc6da9b4   tomcat:9.0    "catalina.sh run"       31 seconds ago Up 31 secon
ds  0.0.0.0:8888->8080/tcp, :::8888->8080/tcp competent_buck
6d15cdd76d8b   tomcat:9-jdk11 "catalina.sh run"       3 months ago  Up 3 minute
s  0.0.0.0:9999->8080/tcp, :::9999->8080/tcp tomcat
estudiante@DAW1: ~/Documents/despliegue/tomacat2$
```

3. Ejecuta el siguiente comando para acceder a la línea de comando de Tomcat y continuar con la configuración

docker exec -it IDContenedor /bin/bash

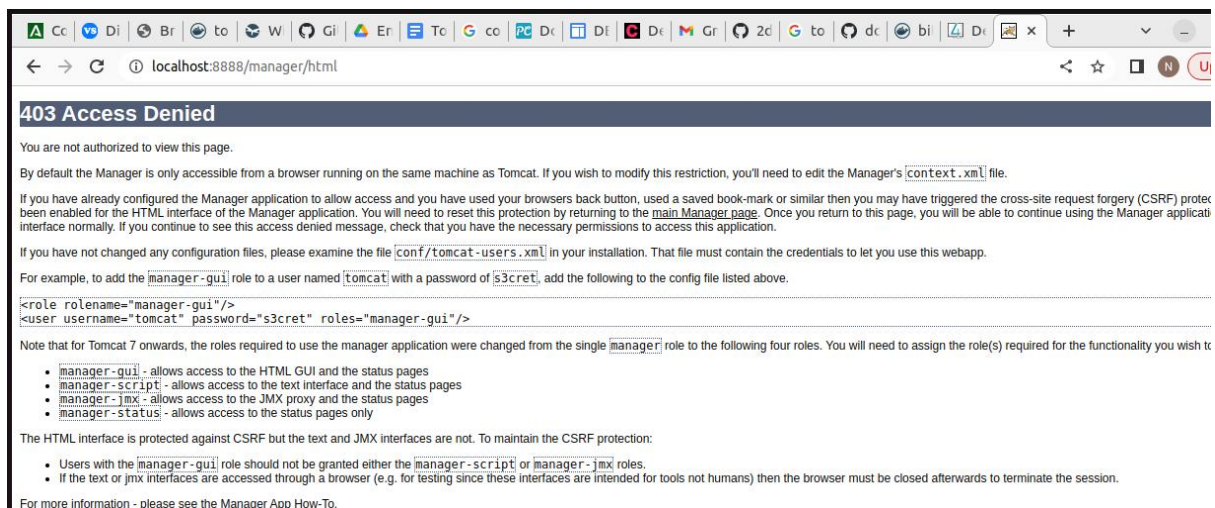
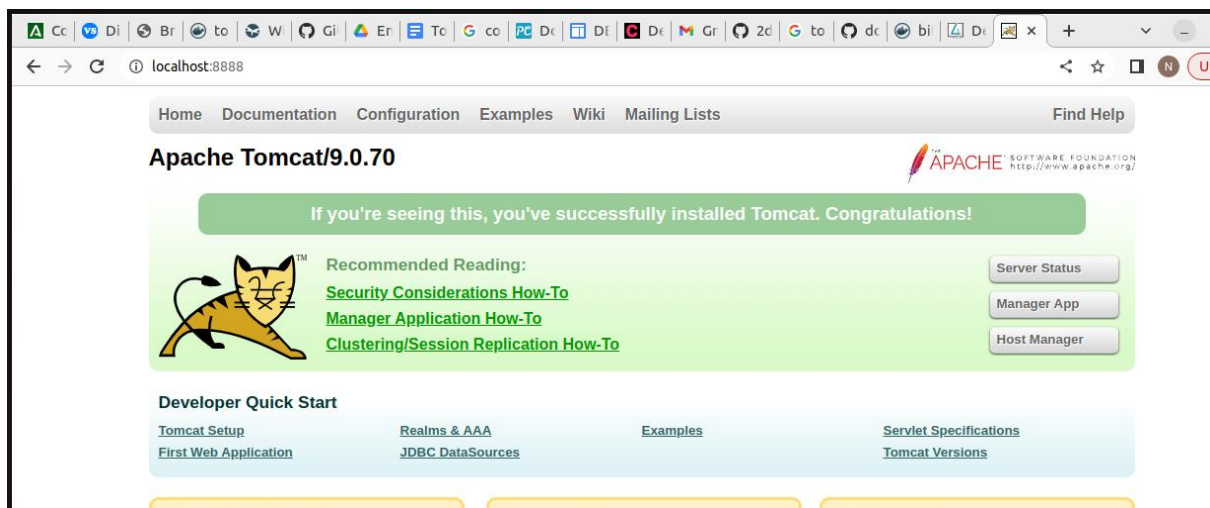


```
root@ae2cdc6da9b4: /usr/local/tomcat
estudiante@DAW1: ~/Documents/despliegue/tomacat2$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS
PORTS         NAMES
ae2cdc6da9b4   tomcat:9.0    "catalina.sh run"       31 seconds ago Up 31 secon
ds  0.0.0.0:8888->8080/tcp, :::8888->8080/tcp competent_buck
6d15cdd76d8b   tomcat:9-jdk11 "catalina.sh run"       3 months ago  Up 3 minute
s  0.0.0.0:9999->8080/tcp, :::9999->8080/tcp tomcat
estudiante@DAW1: ~/Documents/despliegue/tomacat2$ docker exec -it ae2cdc6da9b4 /b
in/bash
```

4. En la línea de comando ejecuta el siguiente comando
`cp -R webapps.dist/* webapps`

```
estudiante@DAW1:~/Documents/despliegue/tomcat2$ docker exec -it ae2cdc6da9b4 /bin/bash
root@ae2cdc6da9b4:/usr/local/tomcat# cp -R webapps.dist/* webapps
root@ae2cdc6da9b4:/usr/local/tomcat#
```

5. Ahora podrás ir a **localhost:8888** para ver Tomcat desplegado, pero si das click en Manager App verás que te da un error ya que falta configurar el contexto y el permiso de usuario.



6. Para configurar el contexto hay que cambiarse de directorio con **cd /usr/local/tomcat/conf/Catalina/localhost** y ejecutar el comando **ls** para ver si el archivo manager.xml está creado. En caso no está hay que crearlo.

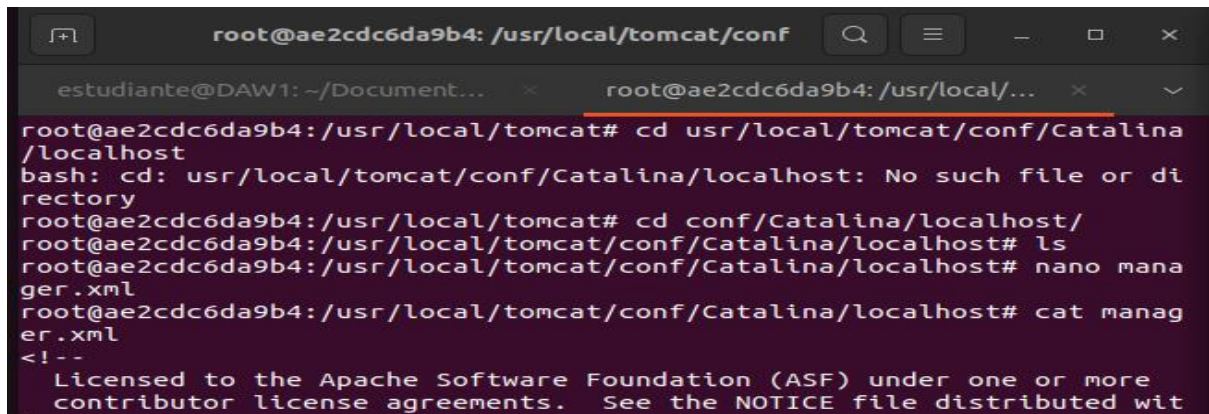
```
root@ae2cdc6da9b4:/usr/local/tomcat/conf/Catalina/localhost# ls
root@ae2cdc6da9b4:/usr/local/tomcat/conf/Catalina/localhost#
```


7. Es posible que para poder crear el archivo con nano tengas que hacer un **apt update** y luego un **apt install nano**.

```
root@ae2cdc6da9b4: /usr/local/tomcat
estudiante@DAW1: ~/Documents/desp... x root@ae2cdc6da9b4: /usr/local/tomcat x
s 0.0.0.0:9999->8080/tcp, :::9999->8080/tcp tomcat
estudiante@DAW1:~/Documents/despliegue/tomacat2$ docker exec -it ae2cdc6da9b4 /bin/bash
root@ae2cdc6da9b4:/usr/local/tomcat# cp -R webapps.dist/* webapps
root@ae2cdc6da9b4:/usr/local/tomcat# apt update
Get:1 http://archive.ubuntu.com/ubuntu jammy InRelease [270 kB]
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [114 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [99.8 kB]
```

```
root@ae2cdc6da9b4: /usr/local/tomcat
estudiante@DAW1: ~/Documents/desp... x root@ae2cdc6da9b4: /usr/local/tomcat x
Need to get 280 kB of archives.
After this operation, 881 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 nano amd64 6.2-1 [280 kB]
]
Fetched 280 kB in 1s (389 kB/s)
debconf: delaying package configuration, since apt-utils is not installed
Selecting previously unselected package nano.
(Reading database ... 7923 files and directories currently installed.)
Preparing to unpack .../archives/nano_6.2-1_amd64.deb ...
Unpacking nano (6.2-1) ...
Setting up nano (6.2-1) ...
update-alternatives: using /bin/nano to provide /usr/bin/editor (editor) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/editor.1.gz because associated file /usr/share/man/man1/nano.1.gz (of link group editor) doesn't exist
update-alternatives: using /bin/nano to provide /usr/bin/pico (pico) in auto mode
update-alternatives: warning: skip creation of /usr/share/man/man1/pico.1.gz because associated file /usr/share/man/man1/nano.1.gz (of link group pico) doesn't exist
root@ae2cdc6da9b4:/usr/local/tomcat#
```

8. Ahora podrás crear el archivo para configurar el contexto usando el comando nano **manager.xml** en el que deberá incluir la siguiente información



```
root@ae2cdc6da9b4: /usr/local/tomcat/conf
estudiante@DAW1: ~/Document... x root@ae2cdc6da9b4: /usr/local/... x
root@ae2cdc6da9b4:/usr/local/tomcat# cd usr/local/tomcat/conf/Catalina
/localhost
bash: cd: usr/local/tomcat/conf/Catalina/localhost: No such file or di
rectory
root@ae2cdc6da9b4:/usr/local/tomcat# cd conf/Catalina/localhost/
root@ae2cdc6da9b4:/usr/local/tomcat/conf/Catalina/localhost# ls
root@ae2cdc6da9b4:/usr/local/tomcat/conf/Catalina/localhost# nano mana
ger.xml
root@ae2cdc6da9b4:/usr/local/tomcat/conf/Catalina/localhost# cat manag
er.xml
<!--
Licensed to the Apache Software Foundation (ASF) under one or more
contributor license agreements.  See the NOTICE file distributed wit
```

```
<!--
    Licensed to the Apache Software Foundation (ASF) under one
    or more contributor license agreements.  See the NOTICE file
    distributed with
    this work for additional information regarding copyright
    ownership.
    The ASF licenses this file to You under the Apache License,
    Version 2.0
    (the "License"); you may not use this file except in
    compliance with
    the License.  You may obtain a copy of the License at
    http://www.apache.org/licenses/LICENSE-2.0
    Unless required by applicable law or agreed to in writing,
    software
    distributed under the License is distributed on an "AS IS"
    BASIS,
    WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either
    express or implied.
    See the License for the specific language governing
    permissions and
    limitations under the License.
-->
<!-- The contents of this file will be loaded for each web
application -->
<Context privileged="true" antiResourceLocking="false"
docBase="${catalina.home}/webapps/manager">
    <!-- Default set of monitored resources. If one of these
    changes, the -->
    <!-- web application will be reloaded.
    -->
    <WatchedResource>WEB-INF/web.xml</WatchedResource>
    <WatchedResource>WEB-INF/tomcat-web.xml</WatchedResource>
    <WatchedResource>${catalina.base}/conf/web.xml</WatchedReso
    urce>
    <Valve
    className="org.apache.catalina.valves.RemoteAddrValve"
    allow="^.*$"/>
</Context>
<!-- Uncomment this to disable session persistence across
Tomcat restarts -->
<!-- <Manager pathname="" /> -->
```

9. Luego hay que cambiar de directorio para configurar los permisos de usuario. Cambia de directorio con **cd /usr/local/tomcat/conf** y ejecuta el comando **ls** para ver los archivos disponibles

```
root@9e94e1c00e4b:/usr/local/tomcat/conf# ls
Catalina                  jaspic-providers.xml    tomcat-users.xml
catalina.policy            jaspic-providers.xsd    tomcat-users.xsd
catalina.properties       logging.properties      web.xml
context.xml               server.xml
```

10. Hay que modificar el archivo tomcat-users.xml para ello usaremos el comando **nano** **tomcat-users.xml** e incluiremos al final del archivo la siguiente información

```
GNU nano 6.2                  tomcat-users.xml *
<user username="robot" password="<must-be-changed>" roles="manager-script"/>
-->
<!--
The sample user and role entries below are intended for use with the
examples web application. They are wrapped in a comment and thus are ignored
when reading this file. If you wish to configure these users for use with th
examples web application, do not forget to remove the <!-- ..> that surround
them. You will also need to set the passwords to something appropriate.
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="<must-be-changed>" roles="tomcat"/>
<user username="both" password="<must-be-changed>" roles="tomcat,role1"/>
<user username="role1" password="<must-be-changed>" roles="role1"/>
-->
<role rolename="manager-gui"/>
<user username="tomcat" password="tomcat" roles="manager-gui"/>
</tomcat-users>

```

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^/ Go To Line


11. Ahora si vas a **localhost:8888** y das click en Manager App te pedirá que introduzcas el usuario y la contraseña para tener acceso al gestor de aplicaciones web de Tomcat

← → ↻ ⓘ localhost:8888

Home Documentation Configuration Examples Wiki Mailing Lists Find Help

Apache Tomcat/9.0.70

If you're seeing this, you've successfully installed Tomcat. Congratulations!

 Recommended Reading:

- [Security Considerations How-To](#)
- [Manager Application How-To](#)
- [Clustering/Session Replication How-To](#)

Server Status
Manager App
Host Manager

Developer Quick Start

- [Tomcat Setup](#)
- [First Web Application](#)
- [Realms & AAA](#)
- [JDBC DataSources](#)
- [Examples](#)
- [Servlet Specifications](#)
- [Tomcat Versions](#)

← → ↻ ⓘ localhost:8888/manager/html


Sign in

http://localhost:8888

Username

Password

Cancel Sign in

 THE APACHE SOFTWARE FOUNDATION

Tomcat Web Application Manager

Message: OK

Manager			
List Applications	HTML Manager Help	Manager Help	Server Status

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Bibilografia

Docker Hub: tomcat

Disponible en línea en: https://hub.docker.com/_/tomcat