

3. Comprobaciones

3.1 Comprueba que el servidor está iniciado y escuchando en el puerto 8080/TCP.

```
root@sriserver:/home/alumno# ps -ef | grep tomcat
tomcat      2205      1  4 14:56 ?        00:00:06 /usr/lib/jvm/default-java/bin/java -Djava.util.l
ogging.config.file=/var/lib/tomcat9/conf/logging.properties -Djava.util.logging.manager=org.apache.j
uli.ClassLoaderLogManager -Djava.awt.headless=true -Djdk.tls.ephemeralDHKeySize=2048 -Djava.protocol
.handler.pkgs=org.apache.catalina.webresources -Dorg.apache.catalina.security.SecurityListener.UMASK
=0027 -Dignore.endorsed.dirs= -classpath /usr/share/tomcat9/bin/bootstrap.jar:/usr/share/tomcat9/bin
/tomcat-juli.jar -Dcatalina.base=/var/lib/tomcat9 -Dcatalina.home=/usr/share/tomcat9 -Djava.io.tmpdi
r=/tmp org.apache.catalina.startup.Bootstrap start
root        2366    1049  0 14:59 pts/0    00:00:00 grep --color=auto tomcat
```

```
root@sriserver:/home/alumno# netstat -ltn | grep 8080
tcp6        0      0 :::8080          :::*              LISTEN
```

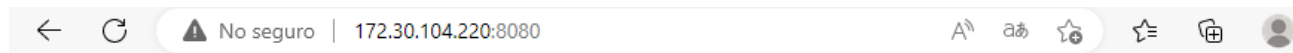
3.2 Consulta el contenido del directorio

```
root@sriserver:/home/alumno# /var/lib/tomcat9/webapps/ROOT/
bash: /var/lib/tomcat9/webapps/ROOT/: Is a directory
root@sriserver:/home/alumno# ls -l
total 8
drwxrwxrwx 2 root root 4096 oct 11 18:18 apuntes
drwxr-xr-x 2 root root 4096 oct 11 19:07 public-html
```

3.3 Consulta el contenido del fichero

```
GNU nano 6.2 /var/lib/tomcat9/webapps/ROOT/index.html
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
  <title>Apache Tomcat</title>
</head>
<body>
<h1>It works !</h1>
<p>If you're seeing this page via a web browser, it means you've setup Tomcat successfully. Congrat<
<p>This is the default Tomcat home page. It can be found on the local filesystem at: <code>/var/lib<
<p>Tomcat veterans might be pleased to learn that this system instance of Tomcat is installed with <
<p>You might consider installing the following packages, if you haven't already done so:</p>
<p><b>tomcat9-docs</b>: This package installs a web application that allows to browse the Tomcat 9 <
<p><b>tomcat9-examples</b>: This package installs a web application that allows to access the Tomcat <
<p><b>tomcat9-admin</b>: This package installs two web applications that can help managing this Tom<
<p>NOTE: For security reasons, using the manager webapp is restricted to users with role "manager-g<
</body>
</html>
```

3.4 Establece una conexión desde la máquina host



It works !

If you're seeing this page via a web browser, it means you've setup Tomcat successfully. Congratulations!

This is the default Tomcat home page. It can be found on the local filesystem at: `/var/lib/tomcat9/webapps/ROOT/index.html`

Tomcat veterans might be pleased to learn that this system instance of Tomcat is installed with `CATALINA_HOME` in `/usr/share/tomcat9` and `CATALINA_BASE` in `/var/lib/tomcat9`, following the rules from `/usr/share/doc/tomcat9-common/RUNNING.txt.gz`.

You might consider installing the following packages, if you haven't already done so:

tomcat9-docs: This package installs a web application that allows to browse the Tomcat 9 documentation locally. Once installed, you can access it by clicking [here](#).

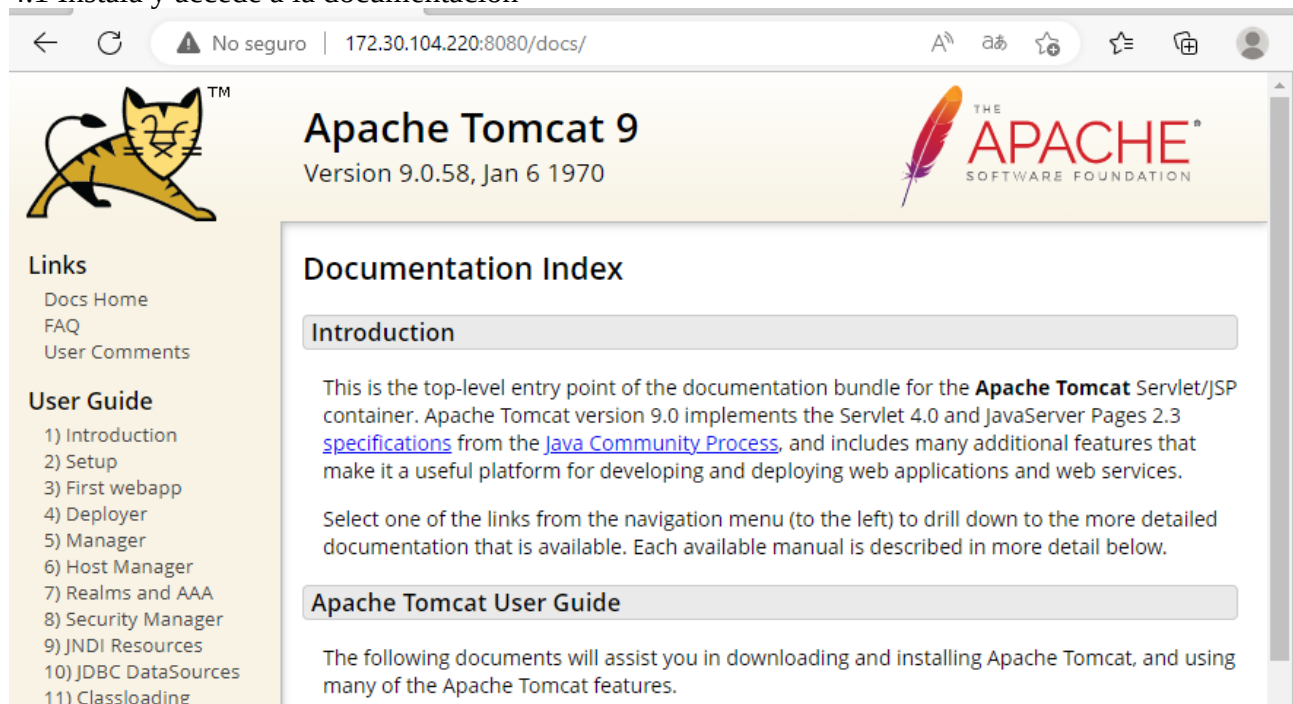
tomcat9-examples: This package installs a web application that allows to access the Tomcat 9 Servlet and JSP examples. Once installed, you can access it by clicking [here](#).

tomcat9-admin: This package installs two web applications that can help managing this Tomcat instance. Once installed, you can access the [manager webapp](#) and the [host-manager webapp](#).

NOTE: For security reasons, using the manager webapp is restricted to users with role "manager-gui". The host-manager webapp is restricted to users with role "admin-gui". Users are defined in `/etc/tomcat9/tomcat-users.xml`.

4. Instalación Documentación y Ejemplos

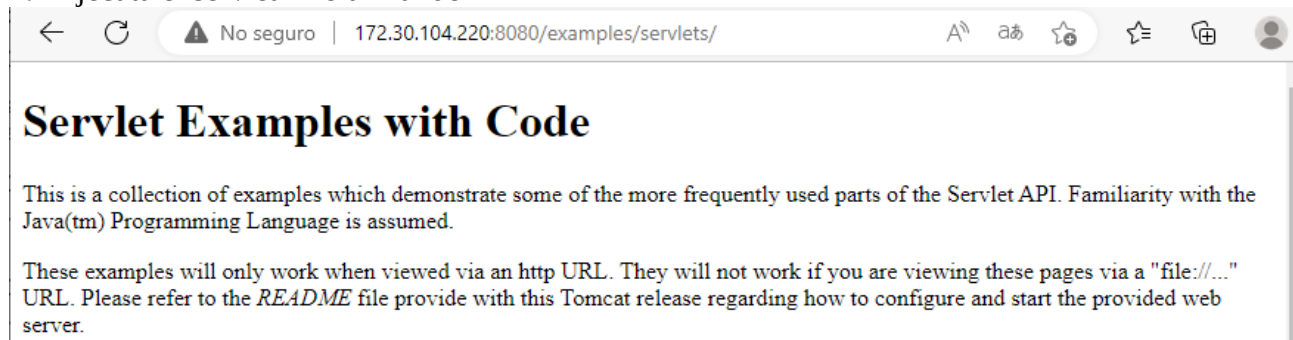
4.1 Instala y accede a la documentación



4.2 Instala y accede a los ejemplos



4.4 Ejecuta el servlet “Hola Mundo”



4.5 Consulta los ficheros locales de documentación y ejemplos (necesitarás permisos)

```
GNU nano 6.2 docs.xml
<?xml version="1.0" encoding="UTF-8"?>
<!--
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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
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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.
-->
<Context path="/docs"
    docBase="/usr/share/tomcat9-docs/docs"
    antiResourceLocking="false" />
```

```
GNU nano 6.2 examples.xml
<Context path="/examples"
    docBase="/usr/share/tomcat9-examples/examples">
    <!-- Enable symlinks for the jars linked from /usr/share/java -->
    <Resources allowLinking="true"/>
</Context>
```

4.6 Consulta el directorio local de documentación

```
root@sriserver:/var/lib/tomcat9/conf/Catalina/localhost# ls -l /usr/share/tomcat9-docs/
total 4
drwxr-xr-x 15 root root 4096 nov  9 15:06 docs
```

4.6 Consulta el directorio local de ejemplos

```
root@sriserver:/var/lib/tomcat9/conf/Catalina/localhost# ls -l /usr/share/tomcat9-examples/
total 4
drwxr-xr-x 7 root root 4096 nov  9 15:07 examples
```

4.7 Examina el contenido del servlet

```
GNU nano 6.2 /usr/share/tomcat9-examples/examples/servlets/helloworld.html
<!--
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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
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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.
-->
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="#FFFFFF">
<p><font color="#0000FF"><a href="servlet/HelloWorldExample">Source Code for HelloWorld Example<font color="#0000FF"><br>
    </font> </h3>
<font color="#0000FF"></font>
<pre><font color="#0000FF">import</font> java.io.*;
<font color="#0000FF">import</font> javax.servlet.*;
<font color="#0000FF">import</font> javax.servlet.http.*;

<font color="#0000FF">public class</font> HelloWorld <font color="#0000FF">extends</font> HttpServlet

```

5. Estructura de Directorios

5.2.- Consulta el directorio /usr/share/tomcat9 (CATALINA_HOME)

```
root@sriserver:/var/lib/tomcat9/conf/Catalina/localhost# ls -l /usr/share/tomcat9
total 20
drwxr-xr-x 2 root root 4096 nov  9 14:56 bin
-rw-r--r-- 1 root root 1017 jul 19 19:04 default.template
drwxr-xr-x 2 root root 4096 nov  9 14:56 etc
drwxr-xr-x 2 root root 4096 nov  9 14:56 lib
-rw-r--r-- 1 root root 149 jul 19 19:43 logrotate.template

```

5.3.- Consulta el directorio: /var/lib/tomcat9 (CATALINA_BASE)

```
root@sriserver:/var/lib/tomcat9/conf/Catalina/localhost# ls -l /var/lib/tomcat9/
total 12
lrwxrwxrwx 1 root root 12 jul 20 19:05 conf -> /etc/tomcat9
drwxr-xr-x 2 tomcat tomcat 4096 jul 20 19:05 lib
lrwxrwxrwx 1 root root 17 jul 20 19:05 logs -> ../../log/tomcat9
drwxr-xr-x 2 root root 4096 nov  9 14:56 policy
drwxrwxr-x 3 tomcat tomcat 4096 nov  9 14:56 webapps
lrwxrwxrwx 1 root root 19 jul 20 19:05 work -> ../../cache/tomcat9

```

6.1.- Consulta el directorio /var/lib/tomcat9/conf o /etc/tomcat9

```
root@sriserver:/var/lib/tomcat9/conf/Catalina/localhost# ls -l /var/lib/tomcat9/conf
lrwxrwxrwx 1 root root 12 jul 20 19:05 /var/lib/tomcat9/conf -> /etc/tomcat9
```

6.2.- Edita el fichero server.xml y analiza su contenido. ¿En qué manera se refleja esa arquitectura en el fichero?

```
GNU nano 6.2 /var/lib/tomcat9/conf/server.xml
<?xml version="1.0" encoding="UTF-8"?>
<!--
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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

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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.
-->
<!-- Note: A "Server" is not itself a "Container", so you may not
define subcomponents such as "Valves" at this level.
Documentation at /docs/config/server.html
-->
<Server port="-1" shutdown="SHUTDOWN">
  <Listener className="org.apache.catalina.startup.VersionLoggerListener" />
  <!-- Security listener. Documentation at /docs/config/listeners.html
  <Listener className="org.apache.catalina.security.SecurityListener" />
  -->
  <!-- APR library loader. Documentation at /docs/apr.html -->
  <Listener className="org.apache.catalina.core.AprLifecycleListener" SSLEngine="on" />
  <!-- Prevent memory leaks due to use of particular java/javax APIs-->
  <Listener className="org.apache.catalina.core.JreMemoryLeakPreventionListener" />
  <Listener className="org.apache.catalina.mbeans.GlobalResourcesLifecycleListener" />
  <Listener className="org.apache.catalina.core.ThreadLocalLeakPreventionListener" />
```

Escucha las diferentes páginas web definidas en las listener class