

Ejercicios Tema 01

7) Instalar el servidor de aplicaciones Tomcat y comprobar que funciona (tanto en Ubuntu como en Windows). Indicar los pasos y comandos implicados (documentar el proceso de instalación).

Paso 1:

Instalamos Apache tomcat y comprobamos el status de dicho servicio.

```
systemctl restart tomcat9.service
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
rsc@ubuntuuserver:~$ systemctl status tomcat9.service
• tomcat9.service - Apache Tomcat 9 Web Application Server
  Loaded: loaded (/lib/systemd/system/tomcat9.service; enabled; vendor preset: enabled)
  Active: active (running) since Thu 2023-09-28 08:59:50 UTC; 16s ago
  Docs: https://tomcat.apache.org/tomcat-9.0-doc/index.html
  Process: 4000 ExecStartPre=/usr/libexec/tomcat9/tomcat-update-policy.sh (code=exited, status=0/
  Main PID: 4004 (java)
  Tasks: 28 (limit: 2221)
  Memory: 92.6M
  CPU: 11.744s
  CGroup: /system.slice/tomcat9.service
          └─4004 /usr/lib/jvm/default-java/bin/java -Djava.util.logging.config.file=/var/lib/tom
sep 28 09:00:01 ubuntuuserver tomcat9[4004]: Deployment of deployment descriptor [/etc/tomcat9/Catal
sep 28 09:00:01 ubuntuuserver tomcat9[4004]: Despliegue del descriptor de configuración [/etc/tomcat
sep 28 09:00:01 ubuntuuserver tomcat9[4004]: The path attribute with value [/host-manager] in deploy
sep 28 09:00:02 ubuntuuserver tomcat9[4004]: Al menos un JAR, que se ha explorado buscando TLDs, aún
sep 28 09:00:02 ubuntuuserver tomcat9[4004]: Deployment of deployment descriptor [/etc/tomcat9/Catal
sep 28 09:00:02 ubuntuuserver tomcat9[4004]: Desplegando el directorio [/var/lib/tomcat9/webapps/ROOT
sep 28 09:00:04 ubuntuuserver tomcat9[4004]: Al menos un JAR, que se ha explorado buscando TLDs, aún
sep 28 09:00:04 ubuntuuserver tomcat9[4004]: Deployment of web application directory [/var/lib/tomca
sep 28 09:00:04 ubuntuuserver tomcat9[4004]: Starting ProtocolHandler ["http-nio-8080"]
sep 28 09:00:04 ubuntuuserver tomcat9[4004]: Server startup in [8530] milliseconds
lines 1-22/22 (END)
```

Paso 2:

Modificamos el archivo de users para crear un usuario con los roles para admin-gui y manager-gui

```

GNU nano 6.2 /etc/tomcat9/tomcat-users.xml
Built-in Tomcat manager roles:
- manager-gui - allows access to the HTML GUI and the status pages
- manager-script - allows access to the HTTP API and the status pages
- manager-jmx - allows access to the JMX proxy and the status pages
- manager-status - allows access to the status pages only

The users below are wrapped in a comment and are therefore ignored. If you
wish to configure one or more of these users for use with the manager web
application, do not forget to remove the <!-- ... --> that surrounds them. You
will also need to set the passwords to something appropriate.
-->
<!--
<user username="admin" password="<must-be-changed>" roles="manager-gui"/>
<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 the
examples web application, do not forget to remove the <!-- ... --> that surrounds
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="admin-gui">
<role rolename="manager-gui">
<user username="root" password="root1234@" roles="admin-gui,manager-gui">
</tomcat-users>

rsc@ubuntu:~$

```

Paso 3:

Comentamos la línea de RemoteAddrValve

```

GNU nano 6.2 /usr/share/tomcat9-admin/manager/META-INF/context.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

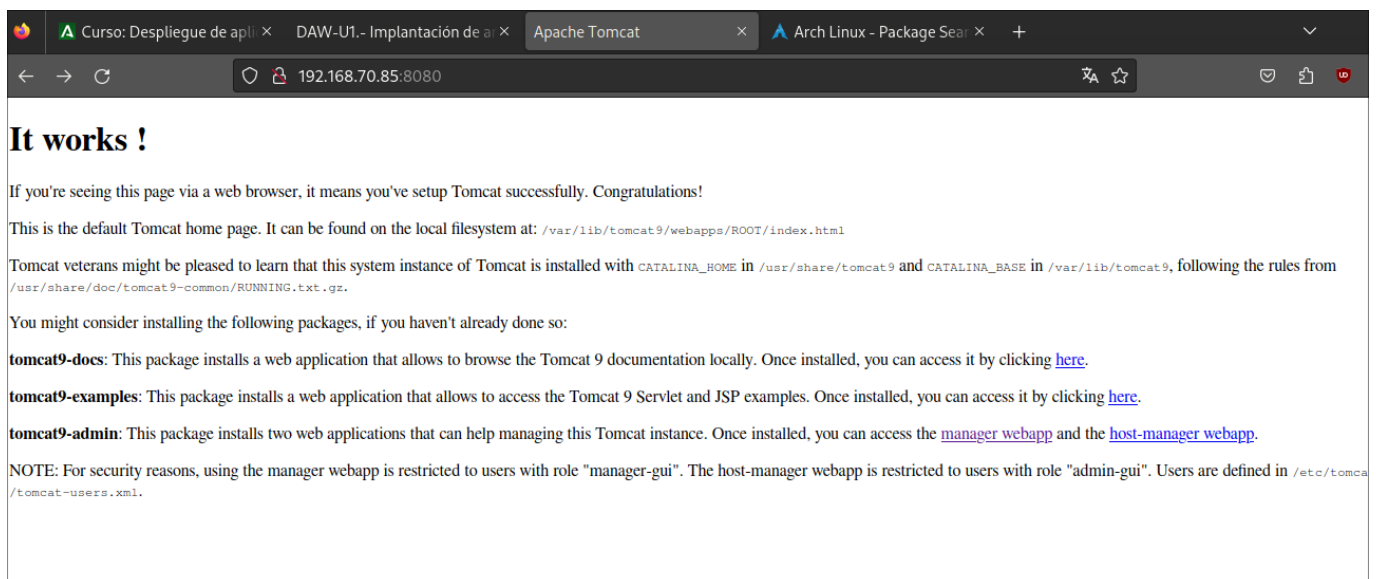
Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->
<Context antiResourceLocking="false" privileged="true" >
  <CookieProcessor className="org.apache.tomcat.util.http.Rfc6265CookieProcessor"
    sameSiteCookies="strict" />
  <!--
    <Valve className="org.apache.catalina.valves.RemoteAddrValve"
      allow="127.\d+.\d+.\d+|::1|0:0:0:0:0:0:1" />
  -->
  <Manager sessionAttributeValueClassNameFilter="java\.lang\.(?:Boolean|Integer|Long|Number|string)" />
</Context>

```

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

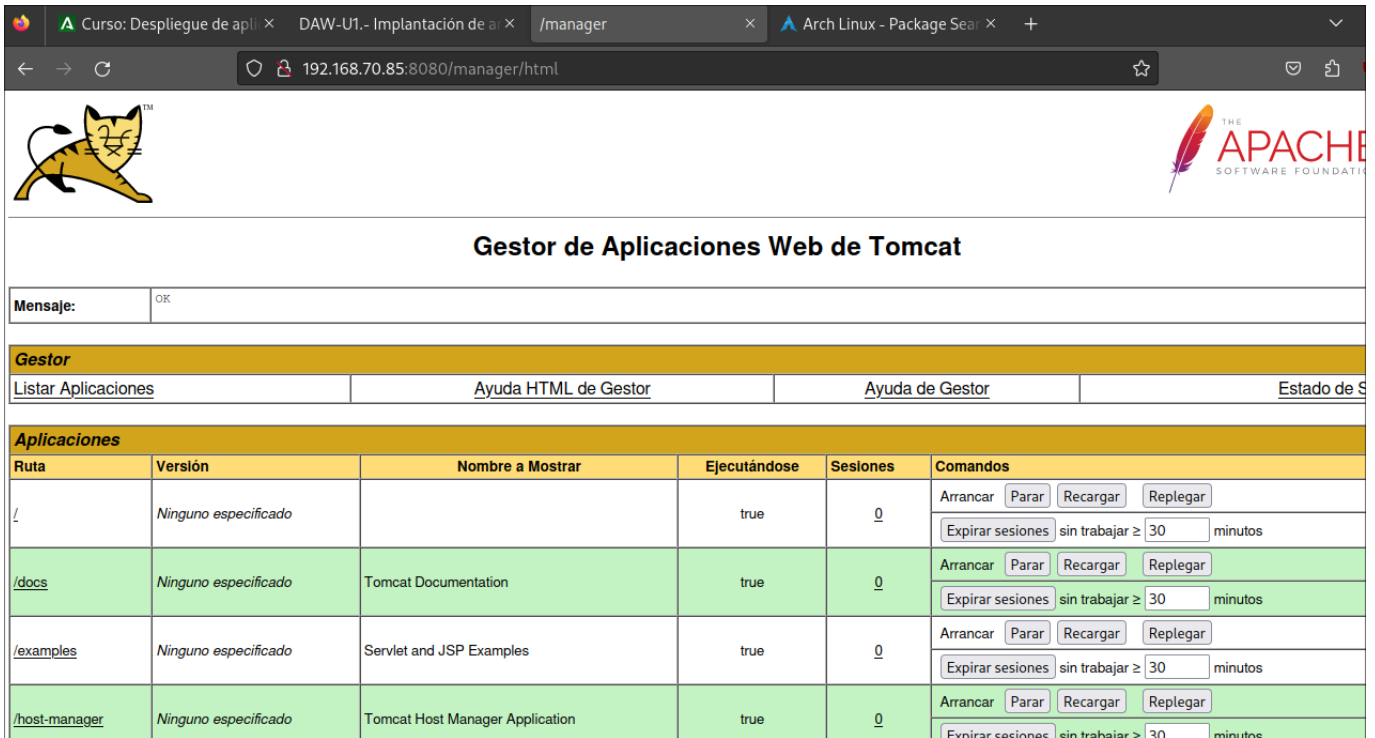
Paso 4:

Nos conectamos a tomcat desde el navegador en nuestra máquina principal.



Paso 5:

Accedemos al admin-gui.



Gestor de Aplicaciones Web de Tomcat

Mensaje: OK

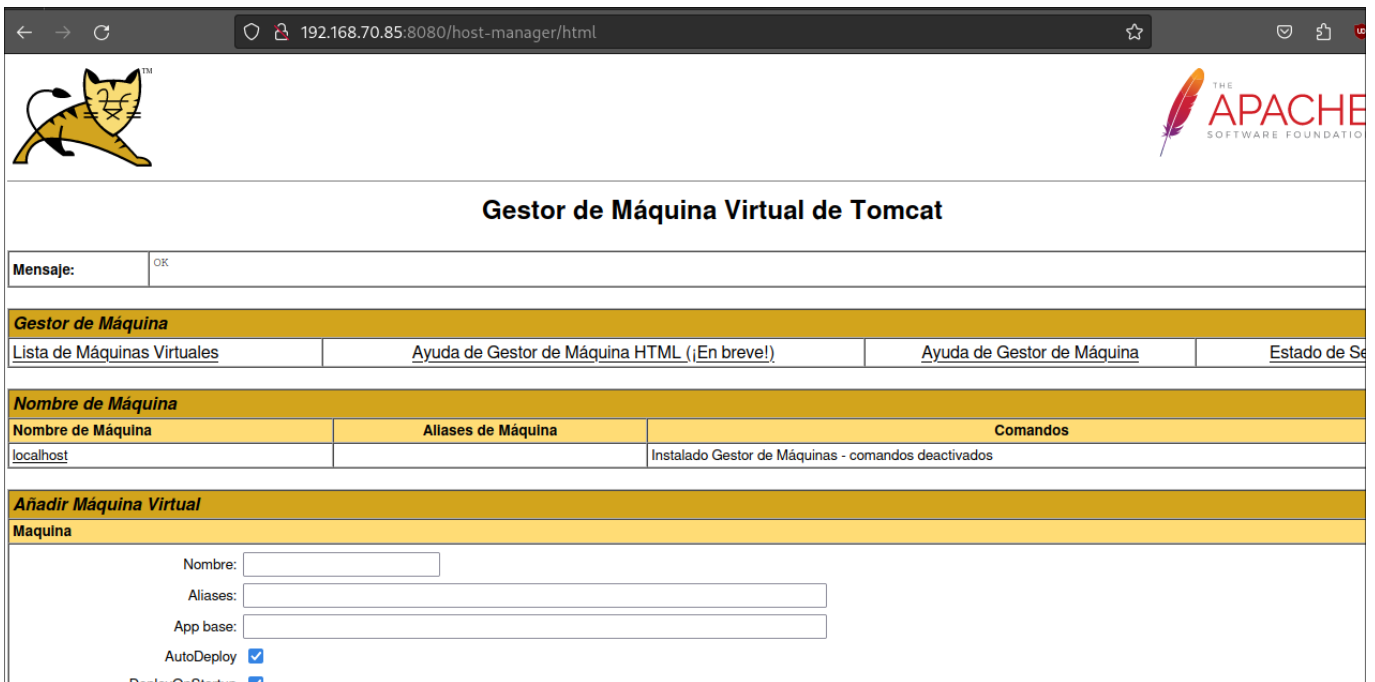
Gestor

[Listar Aplicaciones](#) [Ayuda HTML de Gestor](#) [Ayuda de Gestor](#) [Estado de S](#)

| Ruta | Versión | Nombre a Mostrar | Ejecutándose | Sesiones | Comandos |
|---------------|----------------------|---------------------------------|--------------|----------|--|
| / | Ninguno especificado | | true | 0 | Arrancar Parar Recargar Replegar Expirar sesiones sin trabajar ≥ 30 minutos |
| /docs | Ninguno especificado | Tomcat Documentation | true | 0 | Arrancar Parar Recargar Replegar Expirar sesiones sin trabajar ≥ 30 minutos |
| /examples | Ninguno especificado | Servlet and JSP Examples | true | 0 | Arrancar Parar Recargar Replegar Expirar sesiones sin trabajar ≥ 30 minutos |
| /host-manager | Ninguno especificado | Tomcat Host Manager Application | true | 0 | Arrancar Parar Recargar Replegar Expirar sesiones sin trabajar ≥ 30 minutos |

Paso 6:

Accedemos al host-manager.



Gestor de Máquina Virtual de Tomcat

Mensaje: OK

Gestor de Máquina

[Lista de Máquinas Virtuales](#) [Ayuda de Gestor de Máquina HTML \(¡En breve!\)](#) [Ayuda de Gestor de Máquina](#) [Estado de S](#)

| Nombre de Máquina | Alias de Máquina | Comandos |
|-------------------|------------------|--|
| localhost | | Instalado Gestor de Máquinas - comandos desactivados |

Añadir Máquina Virtual

Máquina

Nombre:

Alias:

App base:

AutoDeploy ☒

DeployOnStartup ☒

8) Instalar y configurar de manera segura el servicio SSH. Conectar al servidor de distintas formas. Indicar los pasos y comandos implicados (documentar el proceso de instalación y configuración).

Paso 1:

Actualizamos el sistema e instalamos ssh, una vez instalado le hacemos status para comprobar si esta operativo.

```

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
rsc@ubuntuuserver:~$
rsc@ubuntuuserver:~$ systemctl status ssh
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Thu 2023-10-05 06:48:53 UTC; 11min ago
     Docs: man:sshd(8)
           man:sshd_config(5)
  Main PID: 763 (sshd)
    Tasks: 1 (limit: 2221)
   Memory: 3.9M
      CPU: 80ms
   CGroup: /system.slice/ssh.service
           └─763 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

oct 05 06:48:48 ubuntuuserver systemd[1]: Starting OpenBSD Secure Shell server...
oct 05 06:48:53 ubuntuuserver sshd[763]: Server listening on 0.0.0.0 port 22.
oct 05 06:48:53 ubuntuuserver sshd[763]: Server listening on :: port 22.
oct 05 06:48:53 ubuntuuserver systemd[1]: Started OpenBSD Secure Shell server.
rsc@ubuntuuserver:~$ _

```

Paso 2:

Nos conectamos desde nuestra máquina principal al servidor, cambiamos previamente el puerto por defecto por el 3326. `ssh -p 3326 rsc@192.168.78.85`.

```

Usage of /: 47.0% of 13.676B   Users logged in: 1
Memory usage: 22%             IPv4 address for enp0s3: 192.168.78.85
Swap usage: 0%

* Strictly confined Kubernetes makes edge and IoT secu
re. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

El mantenimiento de seguridad expandido para Applications está desactivado

Se pueden aplicar 5 actualizaciones de forma inmediata.
5 de estas son actualizaciones de seguridad estándares.
Para ver estas actualizaciones adicionales, ejecute: apt list --upgradable

2 actualizaciones de seguridad adicionales se pueden aplicar con ESM Apps.
Aprenda más sobre cómo activar el servicio ESM Apps at https://ubuntu.com/esm

*** System restart required ***
Last login: Thu Oct 5 07:08:06 2023
rsc@ubuntuuserver:~$

```