

CYSE 301: Cybersecurity Technique and Operations

Assignment 4: Password Cracking (Part A)

Joshua Taylor

01031996

At the end of this module, each student needs to submit a report that includes the solutions to the following tasks. Make sure you take a screenshot for every single step as proof. You need to use

Task A: Linux Password Cracking (25 points)

1. **5 points.** Create two groups, one is **cyse301s23**, and the other is your ODU Midas ID (for example, pjiang). Then display the corresponding group IDs.
2. **5 points.** Create and assign three users to each group. Display related UID and GID information of each user.
3. **5 points.** Choose six new passwords, **from easy to hard**, and assign them to the users you created. You need to show me the password you selected in your report, and **DO NOT** use your real-world passwords.
4. **5 points.** Export all six users' password hashes into a file named "**YourMIDAS-HASH**" (for example, pjiang-HASH). Then launch a dictionary attack to crack the passwords. You **MUST** crack at least one password in order to complete this assignment.

- In these screen shots, I created 2 groups: cyse301s23 and jtayl081. I then created 6 users and assigned them into the groups. The users and groups were: cyse301s23 (terry, barry, and kerry) and jtayl081 (will, bill, jill.) After creating and assigning the users to the groups I created passwords for each user and they were as follows: bill (Password123), will (Pword123), jill (hightop10!), terry (funk123), barry (Gla\$\$10!), kerry (pass012word345). I then unzipped and ran John The Ripper with the rockyou.txt file and after approximately 5-10 minutes it was only able to crack the password for bill.

The screenshot shows a Kali Linux virtual machine with a Metasploit Meterpreter session. The terminal displays the following commands and output:

```

root@Kali:~# msf5 exploit (msf5) > sessions
[*] Active sessions

Id  Name  Type  Information  Connection
--  ---  ---  ---
0   *    *    *            *
1   *    *    *            *
2   *    *    *            *
3   *    *    *            *
4   *    *    *            *
5   *    *    *            *
6   *    *    *            *
7   *    *    *            *
8   *    *    *            *
9   *    *    *            *
10  *    *    *            *
11  *    *    *            *
12  *    *    *            *
13  *    *    *            *
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25  *    *    *            *
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34  *    *    *            *
35  *    *    *            *
36  *    *    *            *
37  *    *    *            *
38  *    *    *            *
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94  *    *    *            *
95  *    *    *            *
96  *    *    *            *
97  *    *    *            *
98  *    *    *            *
99  *    *    *            *
100 *    *    *            *

```

The terminal also shows the execution of the `msf5 exploit (msf5) > sessions -i 2` command, which starts an interaction with session 2. The output shows the user `Administrator` and the IP address `192.168.10.11`.

On the right, a Windows 7 login screen is visible, showing the user selection interface. The user `Jerry` is selected.

At the bottom right, there is a text overlay: "For technology help, contact the ITS Help Desk: (757) 683-3192 | itshelp@odu.edu".

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