



AFRICA REGION TO THE INTERNATIONAL CYBER SECURITY COMPETITION

09 September 2022

AFRICC Individual Assessment :3

Linux Fundamentals Practice Lab: 2

Instructions

- You need to have Ubuntu 20.4.4 or 5 OS, Kali Linux or ParrotOS and Metasploitable3 VM
- **Due date 09 October 2022, 13:00 (GMT +02:00)**
- **No late submissions will be accepted**
- Each member to submit their lab in a write-up format **(Include all the screenshots for each step as evidence of doing except the installation of services & configuration of VMs steps)**
- Submit your work in a **PDF format** to the following email addresses.
 - piusshambabi@gmail.com
 - deepshikha.meetoo1@umail.uom.ac.mu

And CC the following

- mchitauro@nust.na
- tinashchiff@gmail.com
- chancardmaboulou@gmail.com
- mitulnarotam@gmail.com

Section 1: The following tasks should be performed on the Ubuntu 20.4.4

1. Download and Install Ubuntu installer 20.4.4 or 5. *If you already have ubuntu installed, no need to for this step, instead continue to step 2.*
2. Create a user account called **Linuxgeek** and change your **hostname** to your **first name**.
3. Log in with the created account at step 2
4. Create the following group's names with their specified group Ids on the system
 - (1) Redteam 5000
 - (2) Blueteam 5001
 - (3) Pupleteam 5002
 - (4) Greenteam 5003
5. Create the following usernames on the system
 - (1) **Username:** Teamafrika, **UID:** 401, **GID:** 5000, **Fullname:** Team Africa
 - (2) **Username:** Teameurope, **UID:** 402, **GID:** 5000, **Fullname:** Team Europe
 - (3) **Username:** Teamasia, **UID:** 403, **GID:** 5002, **Fullname:** Team Asia
 - (4) **Username:** Teamoceania, **UID:** 404, **GID:** 5003, **Fullname:** Team Oceania
 - (5) **Username:** Teamcanada, **UID:** 405, **GID:** 5002, **Fullname:** Team Canada
 - (6) **Username:** Teamlatinamerica, **UID:** 406, **GID:** 5003, **Fullname:** Team Latin America

(7) **Username:** Teamusa, **UID:** 407, **GID:** 5001, **Fullname:** Team United States of America

6. List/ display all the members of the Redteam, Blueteam, Pupleteam, Greenteam
7. Create “**ICC Competition 2023**” folders under the home directory
8. Create the following subfolders under ICC Competition 2023
 - (1) Continent Africa
 - (2) Continent Europe
 - (3) Continent Asia
 - (4) Continent USA
 - (5) Continent Oceania
 - (6) Continent Canada
 - (7) Continent Latin America
9. List the permissions of folders created in step 8.
10. Change ownership of all the folders created at step 8 as per the table below

Folders' Name	New Owner	New group Owner
Continent Africa	Teamafrika	Redteam
Continent Europe	Teameurope	Redteam
Continent Asia	Teamasia	Pupleteam
Continent USA	Teamusa	Blueteam
Continent Oceania	Teamoceania	Greenteam
Continent Canada	Teamcanada	Pupleteam
Continent Latin America	Teamlatinamerica	Greenteam

11. Create the following files under the home directory

File Name	Owner	Group Owner
Binary_Exploitation.txt	Teamafrika	Redteam
Cryptography.txt	Teameurope	Redteam
Forensics.txt	Teamasia	Pupleteam
Reverse_Engineering.txt	Teamusa	Blueteam
Web_Exploitation.txt	Teamoceania	Greenteam
Tryhackme.txt	Teamcanada	Pupleteam
Hackthebox.txt	Teamlatinamerica	Greenteam

12. Using octal numbers modify Binary_Exploitation.txt permissions to allow Redteam group members to have write and execute only and others without any permission.

13. Using octal numbers modify Cryptography.txt permissions to allow others to read, write, and execute while Group members have to write permission only.
14. Using Octal numbers modify Forensics.txt owner to have read and write while the group member and others have no permissions at all.
15. Using symbolic notation, modify Reverse_Engineering.txt to have full permissions for Owner, Group owner and all others
16. Using symbolic notation, modify Web_Exploitation.txt to have read, write and execute for owner, write only for the group owner and zero for all other users.

Section 2: Bash Scripting (include your script codes in your report)

1. Create a bash script titled *icc* under the home directory that checks if the directory titled "ICC Competition 2023" exists, if exists print the directory name and list its contents permissions. If it doesn't exist then return "The directory name doesn't exist" and then end the statement.
2. Create a bash script titled *commands* under the home directory, the script must execute the following commands, *whoami*, *hostname*, *pwd* and display the information.
3. Modify the script created in **step 2** to execute the *ls -la* command, and display the home directory content.
4. Using the same script created in **step 2**, modify it again to display *passwd* and *group* directories content.
5. (1) Install FTP, SSH and Apache HTTP services on your Ubuntu Machine. (2) Download and configure Metasploitable3 VM from <https://michaelnieto.com/metasploitable-3/>. (3) Create a bash script titled: *ScanningMyNet* on your Kali Linux or ParrotOS that should perform the following functions; (a) Scan your virtual environment network for live machines and record them into a file, (b) perform network reconnaissance to identify open ports and associated services - *Ubuntu and metasploitable3 must be switched on before executing your script.*

*****END*****