# Permission, Please!

**Introduction and/or Background**

Although there are already a lot of good security features built into Linux-based systems, one very important potential vulnerability can exist when local access is granted – that is file permission based issues resulting from a user not assigning the correct permissions to files and directories.

**Objectives**

In this project/lab the student will:

- Gain familiarity with permissions in Linux

**Equipment/Supplies Needed**

- As specified in Lab 0.0.1.
- Linux Installation File: Kali Linux VM

**Procedure**

Perform the steps in this lab in the order they are presented to you. Answer all questions and record the requested information. Use the Linux Virtual Machine to perform lab activities as directed. Unless otherwise stated, all tasks done as a non-root user. If root access is needed use the sudo command.

**Assignment**

1. Create a test file using the touch command: touch file1.txt

2. Modify its attributes to be readable by user and group and remove all attributes from everyone else: chmod 440 file1.txt

3. View file1.txt's default attributes: getfacl file1.txt

4. Give rwx access on file1.txt to the root user: setfacl –m u:root:rwx file1.txt.

5. Display the current directory's attributes contents using a human-readable long listing format and take a screenshot. ls –lh file1.txt

6. Create a new directory named dir1: mkdir dir1

7 Check dir1's default ACL: getfacl dir1/.

8 Move the file1.txt file inside the dir1 directory: mv file1.txt dir1/file1.txt.

9 Create a new file named file2 in the dir1 directory.

10 Add rwx access recursively to the dir1 directory. setfacl –Rm u:root:rw- dir1/

11 Display dir1's contents using a human-readable long listing format and take a screenshot.

12 Switch to the dir1 directory.

13 Set rwx access to the group root on file1.txt and take a screenshot. setfacl –m g:root:rwx file1.txt

14 Create a backup file containing the ACL's custom permissions. getfacl –R * > permissions.acl

15 View the contents of the permissions.acl file and take a screenshot.

**Rubric**

Checklist/Single Point Mastery

| Concerns<br>Working Towards Proficiency | Criteria<br>Standards for This Competency | Accomplished<br>Evidence of Mastering Competency |
|---|---|---|
| | Criteria #1: Screenshot showing Ls –lh file1.txt<br>(25 points) | |
| | Criteria #2: Screenshot showing dir1's contents<br>(25 points) | |
| | Criteria #3: Screenshot showing setfacl –m g:root:rwx file1.txt<br>(25 points) | |
| | Criteria #4: Screenshot showing contents of permissions.acl<br>(25 points) | |