Kyiv Professional College of Communications

Computer Engineering Cycle Commission

**REPORT**

**LABORATORY WORK №9**

in the discipline: "Operating Systems"

**Topic: "Changing owners and file access rights in Linux"**

Completed by:

Students of the RPZ-93b group

**Team 1**: Usenko B.A,

Melnichuk M.A

The teacher:

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**The purpose of the work:**

1. Gaining practical skills in working with the Bash command shell.
2. Familiarity with the basic actions when changing file owners.
3. Familiarity with the basic actions when changing file access rights.

**Material support:**

1. Computer type IBM PC.

2. Windows 7.

3. Virtual machine - Virtual Box (Oracle).

4. GNU / Linux operating system - CentOS.

5. Cisco Network Academy website netacad.com and its online Linux courses.

**Завдання для попередньої підготовки.**

***Готувала матеріал студентка Усенко Б.О.***

1. Прочитайте короткі теоретичні відомості до лабораторної роботи та зробіть невеличкий словник базових англійських термінів з питань призначення команд та їх параметрів.
2. На базі розглянутого матеріалу дайте відповіді на наступні питання:
   1. Яке призначення команди id?
   2. Як переглянути які права доступу має власник файлу?
   3. Як змінити власника групи?
   4. Як можна переглянути у терміналі який тип поточного файлу? Наведіть приклади для різних типів файлів
3. Вивчіть матеріали онлайн-курсів академії Cisco:

* NDG Linux Essentials (Chapter 17 all Topics)

1. Пройдіть тестування у курсі NDG Linux Essentials за такими темами:

* Chapter 17 Exam

**Progress**

***Prepared material by student Melnichuk M.A.***

* 1. Initial work in CLI mode in Linux OS of the Linux family:
  2. Start the Ubuntu\_PC virtual machine ***(if you perform LR tasks through the netacad academy)***
  3. Study all the examples of commands presented in the laboratory work of the course ***NDG Linux Essentials:***
* ***Lab 17: Ownership and Permissions***
  1. Create a table of commands studied in paragraph 2 in the following form:

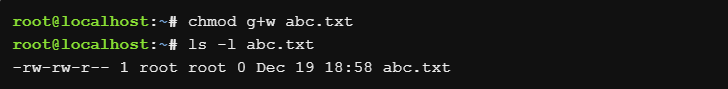
|  |  |
| --- | --- |
| **Command name** | **Its purpose and functionality** |
| mkdir priv-dir pub-dir | Create two directories called priv-dir and pub-dir. |
| touch priv-dir/priv-file  rouch pub-dir/pub-file | Create two files, one file called priv-file in the priv-dir directory and another file called pub-file in the pub-dir directory. |
| ls –l priv-dir  ls –l pub-dir | View the contents of the new directories. |
| chmod 0-rx priv-dir/ | Remove the others' permissions for read and execute. |
| chmod a+x file | Give everyone execute permission. |
| chmod go+r file | Add read permission for group owner and others. |
| chmod g-rw, o-r priv-dir/priv-file | Remove any permission from the group and others on the priv-file. |
| echo “date” > test.sh | Create a test.sh file in the /tmp containing the content "date". |
| chmod u+x test.sh  ls –l test.sh  ./test.sh | Execute test.sh. |
| stat test.sh | The *stat* command displays more detailed information about a file, including providing the group ownership both by group name and GID number. |
| chown | Change both the user and group that owns a file. |
| chqrp | Change the group that owns a file. |
| chown root:root pub-dir | Change the user and group owner of pub-dir to the root user and the root group. |
| chown bin pub-dir/pub-file | Change the user owner of the pub-file to the bin user. |

**Answers to control questions:**

***Prepared material by students Melnichuk M.A., Usenko B.A.***

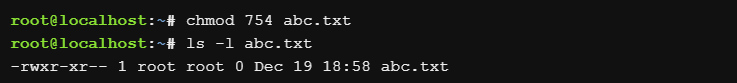
1. If you want to modify some of the current permissions, the symbolic method is usually easier to use. With this method, you specify which permissions you want to change on the file, and the other permissions remain as they are.

For example, to give the group owner write permission on a file named abc.txt, you could use the following command:



2. The numeric method (also called the octal method) is useful when changing many permissions on a file. It is based on the octal numbering system in which each permission type is assigned a numeric value.

For example, to set the permissions of a file named abc.txt to be rwxr-xr-- you could use the following command:



3. On Linux and other Unix-like operating systems, new files are created with a default set of permissions. Specifically, a new file's permissions may be restricted in a specific way by applying a permissions "mask" called the *umask*. The *umask* command is used to set this mask, or to show you its current value.

4. Yes, they will be saved.

*5. Чи є якийсь шаблон, яким система користується щодо прав та доступів при створенні нових файлів. Як можна змінити права дозволу за замовчуванням?*

**Conclusion:**

We gained practical skills in working with the Bash shell, learned the basic steps when changing file owners and file access rights.