**Topic: "Creating users and groups"**

Performed by students RPZ-93B group

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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 creating new users.

3. Familiarity with the basic actions when creating new user groups.

**Material support of classes**

1. Computer type IBM PC.

2. Windows family of operating systems (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

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**Tasks for preliminary preparation.**

1. Read brief theoretical information for laboratory work and make a small dictionary

basic English terms for assigning teams and their parameters.

|  |  |
| --- | --- |
| Англійська | Українська |
| distributions | розподілів |
| can be executed | може бути виконано |
| accomplish | виконати |
| accessing files | доступ до файлів |

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2. On the basis of the considered material give answers to the following questions:

2.1. Explain the concept of UPG, when should they be used?

As you can see, the names of many groups repeat the names of existing users in the system. This part of the configuration scheme is called "userprivategroups", or UPG.

You can display all the group IDs to which the user belongs with the following command. Again, the above command only shows group IDs. You can display the group names with the following command. If you just want to display your user ID without a username, just run the following command.

UPG creates a closed group for each user and sets it as the main group. Then umask changes from 022 to 002.

On some distributions, creating a new user account also automatically creates a group account for the user, called a User Private Group (UPG). On these systems, the group and username would be the same, and the only member of this new group would be the new user.

For distributions that do not create a UPG, new users are typically given the users group as their primary group. The administrator can manually create group accounts that are private for the user, but it's more common for the administrator to create groups for multiple users that need to collaborate. User accounts can be modified at any time to add or remove them from group account memberships, but users must belong to at least one group for use as their primary group.

2.2. What commands can be used to create user groups? Give examples

The groupadd command can be executed by the root user to create a new group. The command requires only the name of the group to be created. The -g option can be used to specify a group id for the new group:

https://lh3.googleusercontent.com/hAJhFBK0IGvGYjVQLo-VTSKAXOM1zykS22lNmereQm67682ZU1s7rHcD1dvIKZvmGbm9ebnvyHlcibH0N88uEvWItkktSfgtIZ529QAooWfRWCwPuk4DLRnhl2Z4

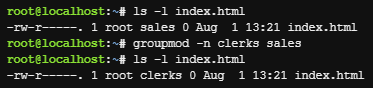
If the -g option is not provided, the groupadd command will automatically provide a GID for the new group. To accomplish this, the groupadd command looks at the /etc/group file and uses a number that is one value higher than the current highest GID number. The execution of the following commands illustrates this:

https://lh3.googleusercontent.com/H-yJ1zLpPxYDBegcXuDQm_02R0cF1PJ_grAN7-4psV8JH3ROtvfy25TQ5nlcYi0usFyELugXtmVYMqOjbCCYuvc4zl7_VrEYhPwl6nHgf1VR0Y2qDQgw2Rw4pP5v

2.3. What commands can I use to change user group settings? Give examples

The groupmod command can be used to either change the name of a group with the -n option or change the GID for the group with the -g option.

Changing the name of the group may confuse users who were familiar with the old name and haven't been informed of the new name. However, changing the group name won't cause any problems with accessing files, since the files are owned by GIDs, not group names. For example:



3. Study Cisco Academy Online Course Materials:

- NDG Linux Essentials (Chapter 16 all Topics)

4. Take the NDG Linux Essentials course on the following topics:

- Chapter 16 Exam

5. Prepare in electronic form the initial version of the report:

- Title page, topic and purpose of the work

- Glossary of terms

- Answers to clauses 2.1-2.3 of the tasks for preliminary training

**Progress.**

1. Initial work in CLI mode in Linux Linux family:

1.1. Start the VirtualBox virtual machine, select CentOS, and start it. Log in

under the user: CentOS, password for login: reverse (if you perform LR in 401 aud.) and lower

terminal.

1.2. Start the Ubuntu\_PC virtual machine (if you are performing LR tasks through the netacad academy)

1.3. Start your Linux operating system (if you are running on your own PC and

installed) and start the terminal.

2. Study all the examples of commands presented in the laboratory work of the NDG Linux course

Essentials:

- Lab 16: Creating Users and Groups

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3. Create a table of commands studied in paragraph 2 of the course of work as follows:

|  |  |
| --- | --- |
| Назва команди | ЇЇ призначення та функціональність |
| getent | can show you both local and network groups. |
| groupadd | can be executed by the root user to create a new group. |
| groupadd | will automatically provide a GID for the new group. |
| groupmod | can be used to rename a group with the -noption or change the GID for a group with the -option |
| groupdel | If you decide to delete a group with this command, keep in mind that all files in this group will be orphaned. |
| passwd | The user can run this command to change the user's password. |
| chage | provides many options for managing password aging information found in the / etc / shadow file. |
| Who and  w | indicate who is currently logged in. |
| last | can be used to determine the current and previous login sessions, as well as their specific date and time. |
| userdel | used to delete users |

**Test questions**

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1. What is the getent command used for?

**Getent** is a Linux command that helps the user to get the entries in a number of important text files called databases. This includes the passwd and the group of databases which stores the user information. Hence getent is a common way to look up in user details on Linux. Since getent uses the same name of service as the system, getent will be going to show all information, including that gained from the network information sources such as LDAP. The databases it usually searches in are: ahosts, ahostsv4, ahostsv6, aliases, ethers (Ethernet addresses), group, gshadow, hosts, netgroup, networks, passwd, protocols, rpc, services, and shadow.

2. How can I delete existing user groups? Will there be information about them somewhere in system?

If you decide to delete a group using the groupdel command, keep in mind that all files belonging to this group will be orphaned.

Only additional groups can be deleted, so if any group that is the primary group for any user cannot be deleted. group name:



3. How can I change the user password?

There are several ways to change a user's password. The user can execute the passwd command, the administrator can execute the passwd command, specifying the user name as an argument, or also available graphical tools.

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4. What is the purpose of the chage command?

Provides many options for managing password aging information found in the / etc / shadow file.

5. What parameters of the usermod command do you consider the most used?

-d HOME\_DIR - Sets HOME\_DIR as the new home directory for the user.

-l NEW\_LOGIN - Change the login username.

-L - Block user account.

-U - Unlock your user account.

**Conclusion:** I gained practical skills in working with the Bash shell, learned the basic steps for creating new users and the basic steps for creating new user groups.