**"Kyiv Vocational College of Communication"**

**Cyclic Commission of Computer Engineering**

**EXECUTION REPORT**

**LABORATORY WORK No. 9**

from the discipline: "Operating systems"

**Topic: "System and user protection in Linux. Creating users and groups"**

**Performed by students of the group:**

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**Checked by the teacher**

Sushanova V.S

**Work of group students КСМ-13Б Team:** **PMC wolf group**

**The goal of the work:**

1. Getting practical skills for working with the Bash command shell.

2. Familiarity with basic file system navigation commands.

3. Familiarity with basic commands for managing files and directories.

**Material provision of classes**

1. IBM PC type computer.

2. OS family Windows (Windows 7).

3. Virtual machine - Virtual Box (Oracle).

4. GNU/Linux operating system - CentOS.

5. Cisco network academy site netacad.com and its online Linux courses

**Tasks for preliminary preparation:**

**Ilya Pogrebnyak was looking for material**

**4.1. Explain the concept of UPG, when it is appropriate to use them?**

UPG (User and Group Profiles) are user and group profiles used to manage access rights to files and directories on Linux systems. UPGs contain information about users and groups, including their names, default groups, group IDs, and file and directory permissions.

**\* UPG should be used in the following cases:**

- For centralized management of access rights to files and directories on the system.

- To ensure system security by restricting user access rights to files and directories.

- To simplify system administration by reducing the number of commands that must be used to manage access rights.

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

- To create a user group in Linux systems, the following commands are used:

\* groupadd <groupname> - creates a group with the name <groupname>.

\* groupadd -g <gid> - creates a group with the name <groupname> and the group ID <gid>.

**- For example, to create a group with the name "developers" and a group ID of 1000, you can use the following command:**

groupadd -g 1000 developers

**4.3. What commands can be used to change user group settings? Give examples**

**- To change the settings of user groups in Linux systems, the following commands are used:**

\* groupmod -n <newname> <groupname> - changes the name of the group <groupname> to <newname>.

\* groupmod -g <gid> - changes the ID of the group <groupname> to <gid>.

\* groupmod -a <username> <groupname> - adds user <username> to group <groupname>.

\* groupmod -d <username> <groupname> - removes user <username> from group <groupname>.

**- For example, to change the name of the group "developers" to "dev" you can use the following command:**

\* groupmod -n dev developers

**- To change the ID of the "developers" group to 2000, you can use the following command:**

\* groupmod -g 2000 developers

**- To add the user "johndoe" to the "developers" group, you can use the following command:**

\* gpasswd -a johndoe developers

**Progress  
1)** **The table was made by Barabash Matviy**

|  |  |
| --- | --- |
| passwd | Changes the password for the current account. |
| chage | Changes the password settings for the current account. |
| useradd | Creates a new account. |
| usermod | Modifies an existing account. |
| userdel | Deletes an existing account. |
| groupadd | Creates a new group. |
| groupmod | Modifies an existing group. |
| groupdel | Deletes an existing group. |
| gpasswd | Adds or removes group members. |
| chgrp | Changes the owner group of a file or directory. |
| chown | Changes the owner of a file or directory. |
| sudo | Allows a user to execute commands with superuser privileges. |
| sudoers | A file that contains a list of users who have access to sudo. |
| passwd -l <username> | Locks the account. |
| passwd -u <username> | Unlocks the account. |
| passwd -x <username> | Removes the password for the account. |
| passwd -S <username> | View account status. |
| useradd -g <groupname> <username> | Creates an account with the default group. |
| useradd -G <group1>, <group2> <username> | Creates an account with additional groups. |
| useradd -m <username> | Creates an account from the home folder. |
| useradd -s <shell> | Creates an account with the given shell. |
| usermod -g <groupname> <username> | Changes the default group for an account. |
| usermod -G <group1>, <group2> <username> | Adds an account to additional groups. |
| userdel <username> | Deletes an account. |
| groupadd <groupname> | Creates a group. |
| groupmod -g <gid> <groupname> | Changes the group ID. |
| groupmod -n <newname> <groupname> | Changes the group name. |
| groupdel <groupname> | Deletes a group. |
| gpasswd -a <username> <groupname> | Adds a user to a group. |
| gpasswd -d <username> <groupname> | Removes a user from a group |
| chgrp <groupname> <filename> | Changes the group of the owner of the file. |
| chown <username> <filename> | Changes the owner of a file. |