“Kyiv specialized College of Communications”

Commission of computer engineering

**PERFORMANCE REPORT**

**WORK-CASE №2**

From the discipline: "Operating systems"

The students

performed Groups RPZ-03

Team 3: Kanavets K.S.,

Kryvenko A.I.,

Kulikovska M.V.

Checked by the teacher

Sushanova V.S.

Київ 2023

***The material was prepared by student Кryvenko Andrew (AndrewKryvenko)***

1.Installed type II hypervisor - VirtualBox.

2.Describe a set of basic actions in the hypervisor you have installed:

• Create a new virtual machine;

Click the "New" button on the VirtualBox toolbar;

Enter the name of the virtual machine and select the type of operating system;

Set the required amount of RAM and specify the size of the virtual hard disk;

Specify other settings that are necessary to create a virtual machine, such as the number of processors, the size of the video memory, and etc.

• Select/add hardware available for the virtual machine;

Open the virtual machine in VirtualBox;

Open the "Settings" tab;

Select the required hardware type (for example, network card, sound card, USB controller) and configure its settings;

Save the settings.

• Configure the network and connect to Wi-Fi points;

Open the virtual machine in VirtualBox;

Open the "Settings" tab;

Select the network type (for example, NAT, bridge network, internal network) and configure its settings, if necessary;

If you need to connect to a Wi-Fi point from the virtual machine, you need to install an additional software tool, such as "VirtualBox Guest Additions", and configure the connection to the virtual machine's network.

• Ability to work with external media (flash memory)

Make sure that the virtual machine has access rights to USB ports;

Connect the external storage device to a physical USB port on your computer;

In the virtual machine, open the Devices menu and select the required USB drive from the list of available devices;

After connecting the external storage device to the virtual machine, it can be used in the same way as in a physical system.

***The material was prepared by student Kanavets Kateryna (kanavetsk)***

3.The GNU/Linux CentOS operating system is installed in a basic configuration with a graphical shell in the basic configuration.

4. Create a second virtual machine and do the following for it:

- Install the GNU/Linux CentOS operating system in a minimal configuration with terminal I/O and no graphical user interface;

- Install the GNOME graphical shell on top of the OS installed in the previous step;

- Install a second graphical shell (a possible list of them can be found in Lab 1) and compare its capabilities with GNOME.

The following steps will allow you to create a second virtual machine and perform the requested actions:

1. Open the virtual machine manager and create a new virtual machine.
2. Select the GNU/Linux CentOS operating system and install it in a minimal configuration with terminal I/O without a graphical interface.

• Download the CentOS image from the official website and start the virtual machine with the CentOS disk.

• After booting the disk, select "Install CentOS" and set the minimum OS configuration.

• Select the "Server with GUI" option to install the basic GUI components that are required to install graphical shells.

1. After installing the OS, log in to the system using a terminal and run the following commands to install the GNOME graphical shell:

*sudo yum groupinstall "GNOME Desktop"*

1. After installing GNOME, restart the system with the command:

*sudo reboot*

1. After rebooting, log in to the system and launch the GNOME graphical shell with the command:

*Startx*

1. To install the second graphical shell, run the following commands:

*sudo yum install xfce4*

1. After installing XFCE, restart the system and log in.
2. Start XFCE with the command:

*startxfce4*

1. Some features may differ depending on the OS version and additional software installed in the virtual machine.

With GNOME and XFCE, you can open applications, configure the system, change screen and desktop security settings, configure the network, and much more. GNOME has more advanced functionality and customization options, while XFCE is lighter and faster to use.

***The design and translation was prepared by student Maria Kulikovska (@Smith5004)***