WORK CASE №3

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1.

How to clone a virtual machine.

Изображение выглядит как текст, программное обеспечение, Мультимедийное программное обеспечение, Значок на компьютере

Автоматически созданное описание1)To make a machine clone, you need to right-click on your virtual machine, and then click "Clone"

2)You can then configure the virtual machine clone

Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Автоматически созданное описание

Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Автоматически созданное описание

3)This is what we got

Изображение выглядит как текст, снимок экрана, программное обеспечение, Значок на компьютере

Автоматически созданное описание

What are the steps to export your virtual working OS?

1. You need to right-click on the selected virtual machine, and then select "Export OS" in the context menu. Изображение выглядит как текст, программное обеспечение, Мультимедийное программное обеспечение, Значок на компьютере

   Автоматически созданное описание
2. : Then we will choose which car we need to export

Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Автоматически созданное описание

Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Автоматически созданное описание3) We will be asked where you want to save the exported virtual machine. Choose the path and folder to save the export file.

Изображение выглядит как текст, снимок экрана, программное обеспечение, Мультимедийное программное обеспечение

Автоматически созданное описание

4) Now we have virtual machine export files that can be moved or sent to another computer and import the virtual machine again.

2. Describe what types of organization of network connections are supported in the environment of virtual machines, what is the peculiarity of each of them:

1) ranslation of network addresses NAT

Features: In NAT mode, a virtual machine connects to a virtual router, which transforms its network traffic and allows it to perform external network communication through the host system.

2) Network bridge (Bridged)

Features: In Bridged mode, the virtual machine is connected to the physical network through the host system, but has its own IP address on the same network as the physical computers. It can interact with other devices on that network just like any other physical device.

3) Virtual host adapter (Host-only)

Features: In Host-only mode, virtual machines are connected to a virtual local network, and they can only interact with each other and with the host system, but do not have access to the external network.

4) Internal network (Internal Network)

Features: In Internal Network mode, virtual machines are connected to a virtual isolated network, and they can only communicate with each other, but do not have access to the host system or the external network.

3.

1)Demonstrate basic commands for configuring OS network settings, explain what they do.

ip addr-This command will show information about all network interfaces on your machine, including their IP addresses and status.

Nmcli connection show-This command lists the available network connections along with their names.

nmcli connection up -This command activates a network connection with the name which will allow the new IP address and other settings to be used.

nmcli connection down- command to disable network connection

2) Both OSes must have access to the Internet. Open your browser and watch any video on youtube

Изображение выглядит как текст, снимок экрана, программное обеспечение, Веб-сайт

Автоматически созданное описание

1. Configure and demonstrate messaging between two OSes on a local network. What commands should be entered in the terminal?

Изображение выглядит как текст, снимок экрана, программное обеспечение

Автоматически созданное описание ip addr- This command will show information about network interfaces, including IP addresses.

ping «IP»- This command will confirm that the network connection between them is available. also we will see the response delay statistics.

ping -c 4 1 - This command will send 4 packets to the second machine at 1 second intervals.

- Configure a shared network folder for both OSes. Try copying the files from this directory to the user's home directory (virtual desktop OS) and to the desktop (virtual desktop OS clone).

Изображение выглядит как текст, снимок экрана, Шрифт, число

Автоматически созданное описание

everything was done as it should be, but it says that there is no such file, and we could not fix it.

4. How can information be exchanged between your main OS (such as Windows) and virtual OSes? Copy any audio file from your main OS to the desktop of the virtual OS and its clone. How to do the reverse action when you need to copy a document from the virtual OS desktop to your main desktop OS?

Since we failed to complete the 3rd task and it is related to the 4th, we simply analyzed the commands and how to complete this task step by step.

sudo mount -t vboxsf shared\_folder\_name /mnt/shared You need to replace "shared\_folder\_name" with the name of your shared folder and "/mnt/shared" with the path of the folder where we want to mount it.

cp /mnt/shared/audio\_file.mp3 ~/Desktop/ should replace "audio\_file.mp3" with the name of our audio file.

after that, the audio file from your main OS should be copied to the desktop of the CentOS 7 virtual machine and its clone.

**Сonclusion:** In this work case, we cloned a virtual machine, configured network interaction between virtual OSes using various methods, including setting network parameters, sharing data over the network, and sharing files. Information exchange between the main OS and virtual OSes was also organized. The work case made it possible to get acquainted with the main aspects of configuring virtual machines and their interaction in the network.