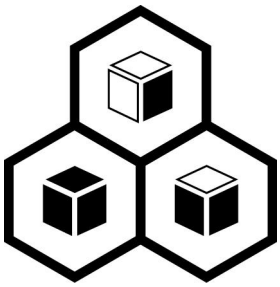


JoinVDI Virtualization Manger Installation Guide

Standalone server version

REV12：21.08.30

Table of Contents

1. Prerequisites

1.1 Hardware requirements

Hardware	Description
A Server	Install and run the JoinVDI Configuration requirements: CPU: At least a quad core x86_64 Memory: At least 16GB Storage: At least 50GB Network Interface: At least 1 Gbps NIC
A U disk	A bootable U disk to install the JoinVDI
A Windows computer	Assist in installation and manage the JoinVDI

1.2 Windows softwares

Software	Description
Quick Installation Tool	Auxiliary the installation of JoinVDI
virt-viewer	Access the VM console to manage
Rufus	Write the ISO disk image to a U disk
Hash	Verify MD5 code of ISO file
Chrome browser	Access the JoinVDI platform

- Please install the softwares on the Windows computer in advance.

1.3 Installers

Installer	Description
JoinVDI.iso	JoinVDI Virtualization Manger Installation ISO
MD5.txt	MD5 code for verifying the JoinVDI.iso
JoinVDI guest tools.zip	The functional plug-in installed in the VMs.
Virspire.exe	The desktop agent installed in the VMs
Windows ISO	The system image of the VMs(example: Windows 10 X64 LTSC)

1.4 Server network environment

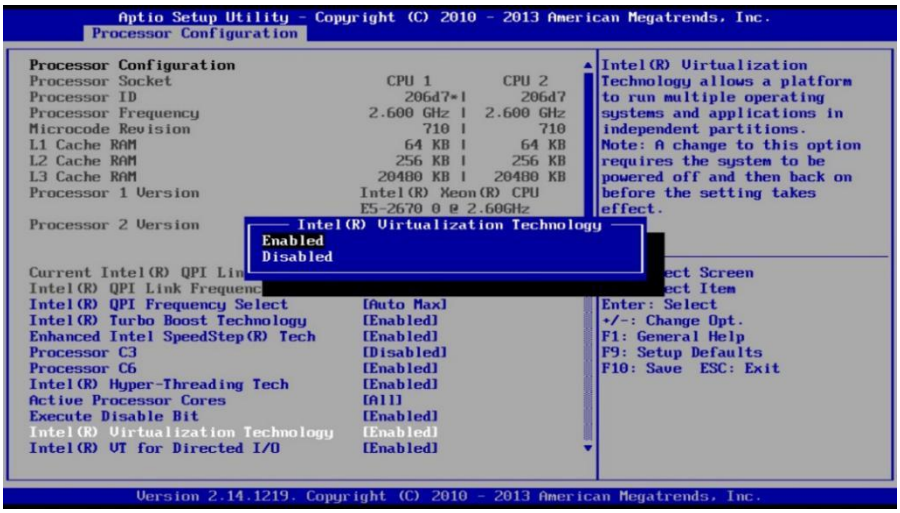
- Prepare a local area network, it is recommended to use DHCP to assign IP.
- The server and the Windows computer are connected to the same network segment.
- Divide 2~3 available IPs in advance, and confirm the IP assigned to the server. The server IP is long-term exclusive.

1.5 Configure BIOS settings on the server

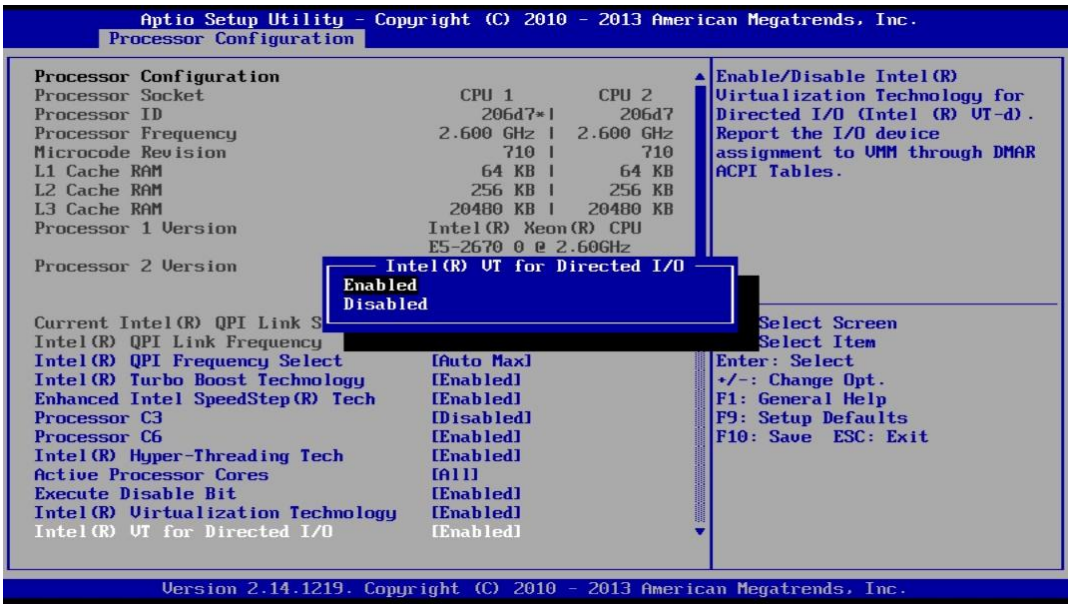
- All CPUs must have support for the Intel® 64 or AMD64 CPU extensions, and the Intel VT® or AMD-V™ hardware virtualization extensions enabled.

Setting example of Intel platform:

1) Enabled **Intel(R) Virtualization Technology**



2) Enabled **Intel(R) VT for Directed I/O**



3) Verifying BIOS system time

4) Disabled Power Savings
   Disable **Processor C3**
   Disable **Processor C6**

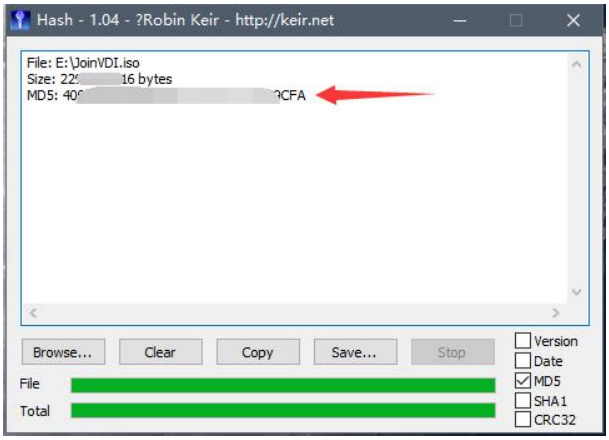
2. Install JoinVDI system on the Server

- JoinVDI needs to be installed on the physical machine. Installing it in a virtual machine may be abnormal during the installation process or when using the platform!

2.1 Verify the JoinVDI image

Run the Hash on the Windows computer, drag the JoinVDI image file into the Hash box, and calculate the MD5 value of the JoinVDI image files.

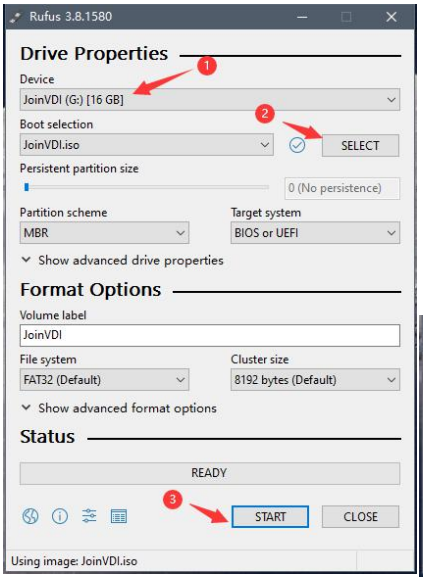
- If the calculated MD5 value is not the same as the MD5 value we provide, it means that the file has been damaged. Please obtain the image file again.



2.2 Create a startup USB Flash Drive

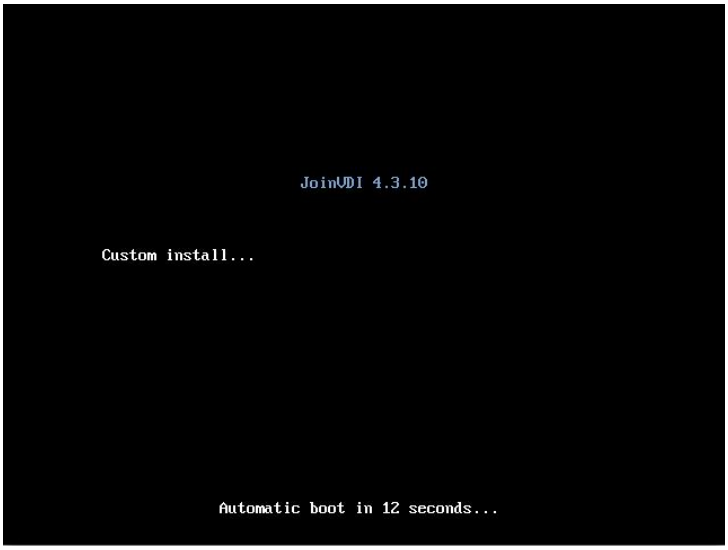
- The example is the step of burning with the Rufus-3.8

1) Run the **Rufus-3.8** after Attach the U disk to the Windows computer
2) Select the U disk
3) Select the JoinVDI image file
4) Click **START** to create. Click **OK** to permit DATA DESTROYED.



2.3 Install JoinVDI system

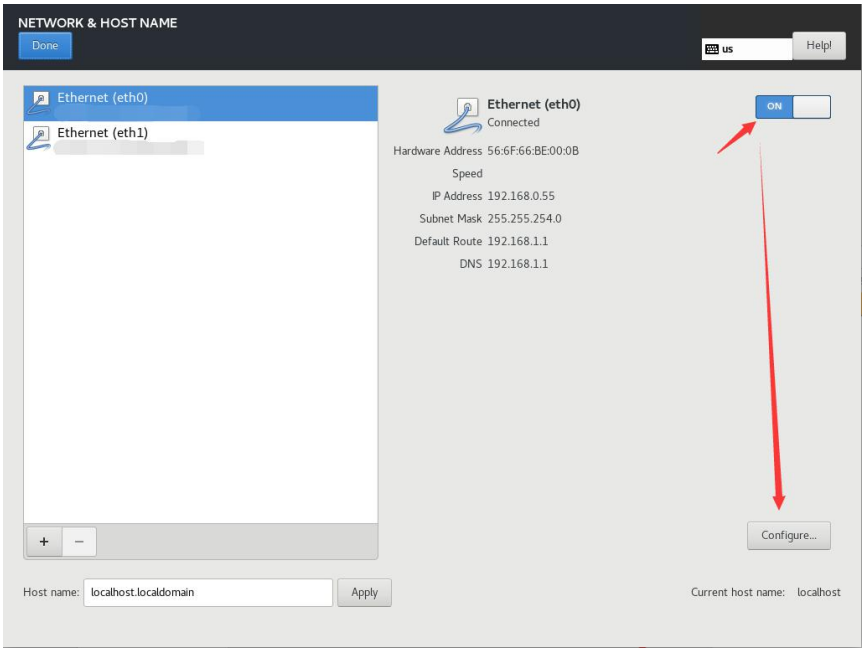
1) Attach the U disk to the server. Start the server and booting from the bootable U disk. From the boot menu, select **Custom install...** and Press **Enter**.



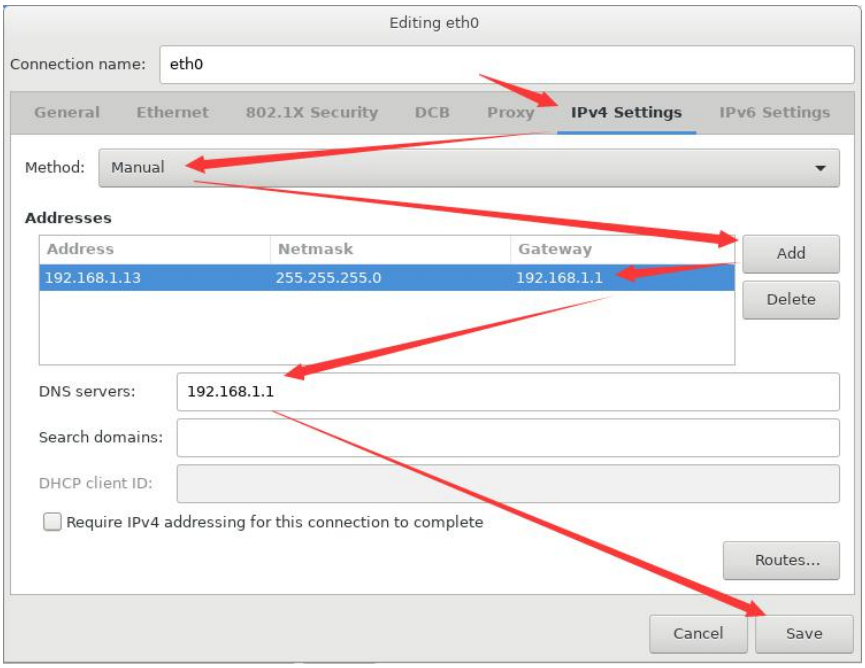
2) Configure NETWORK & HOSTNAME

3) Configure Network

- Only one of them can be enabled When there are multiple networks.

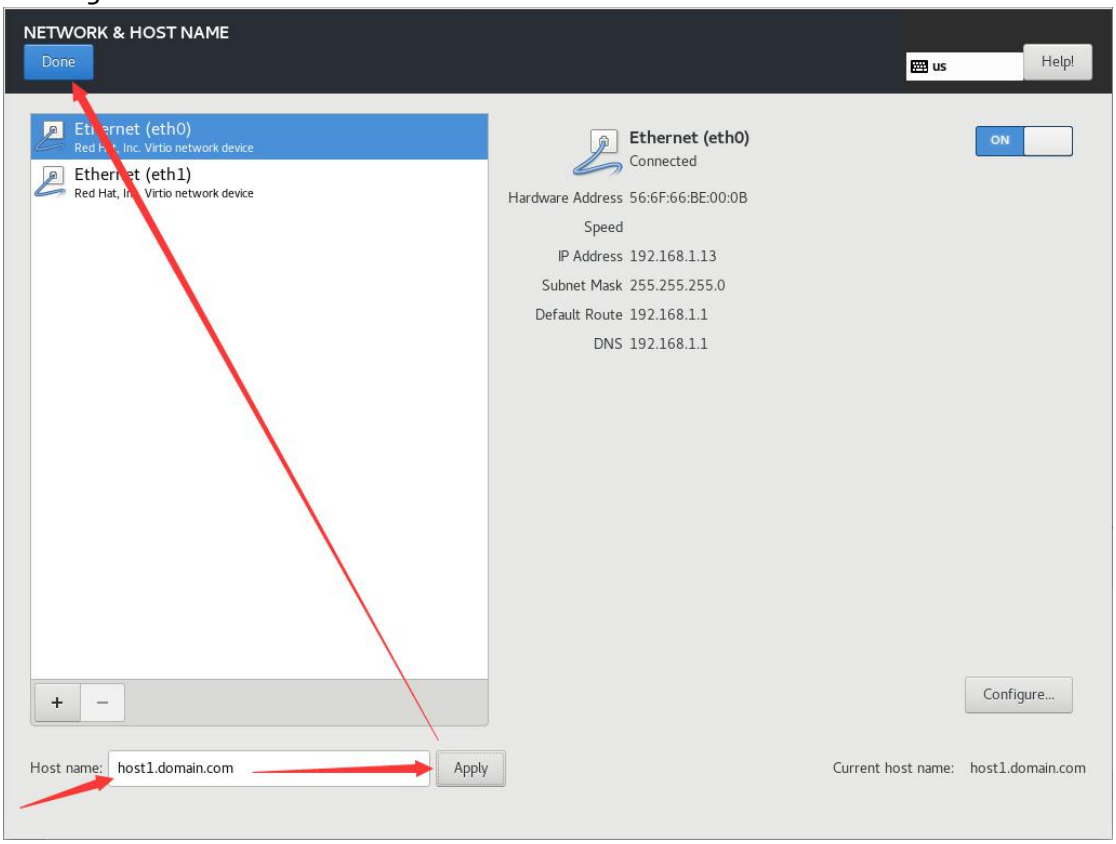


- Set a static IP as the server IP.



4) Configure Host name

- It is recommended to follow the naming rules: aaa.bbb.com
  e.g.: host1.domain.com

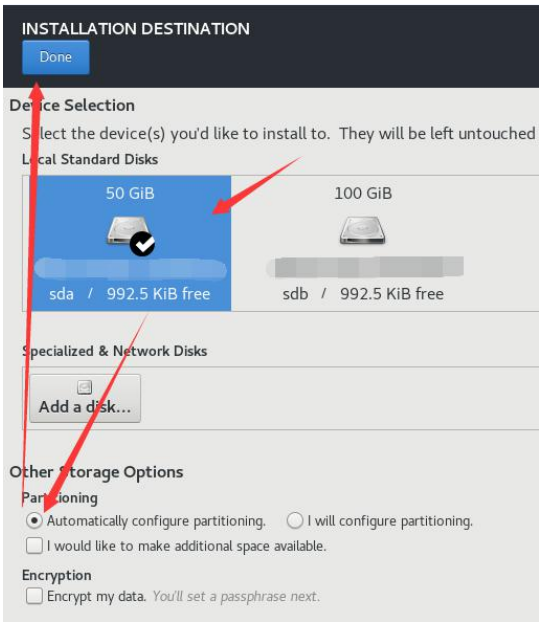


5) Configure DATE & TIME

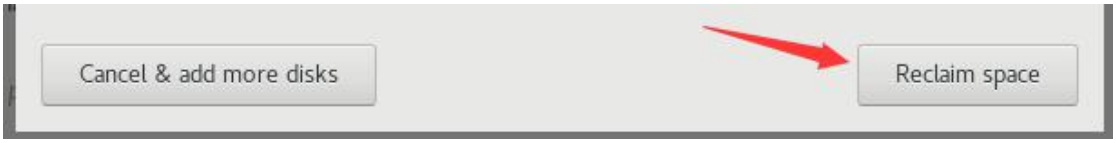
- Select a time zone according to where the server is used
  e.g. **Americas/New York**
- Incorrect time zone setting may cause abnormal during the installation process or when using the platform. Check again the time zone before click **Begin installation**

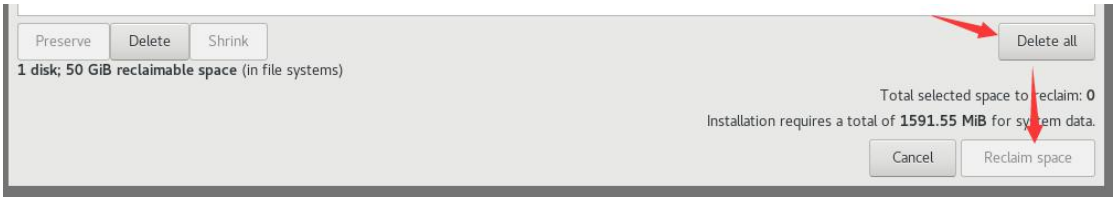
6) Configure INSTALLATION DESTINATION

- Select the device on which to install JoinVDI and use the **Automatically configure partitioning** option, click **Done**



- If there is data in the selected disk, click **Reclaim space**, **Delete all** and **Reclaim space**





7) Click **Begin Installation**

8) Configure ROOT PASSWORD

- The root password can be set to **admin@jvvm**

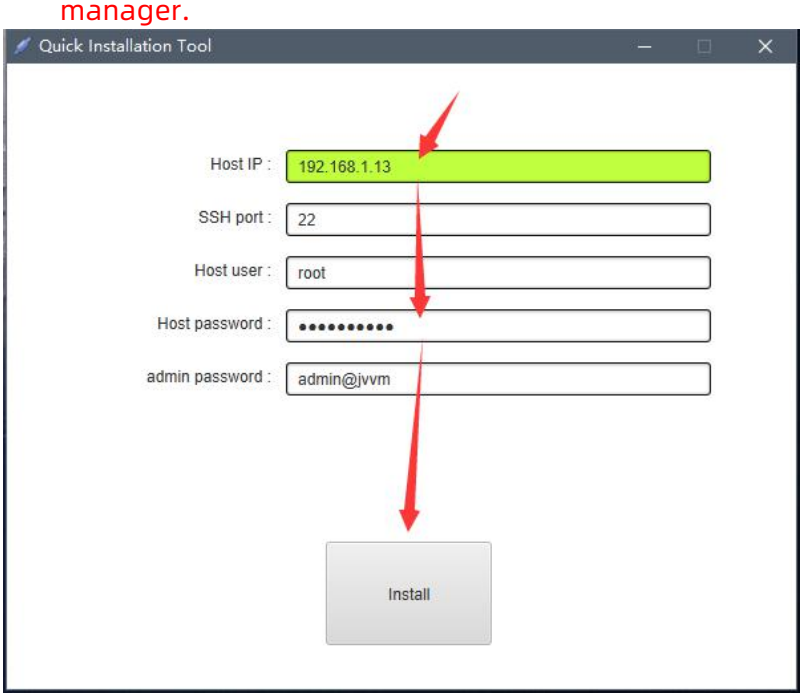
9) After the installation is completed, reboot the server

- Disconnected the U disk before **Reboot** to avoid rebooting to the U disk.

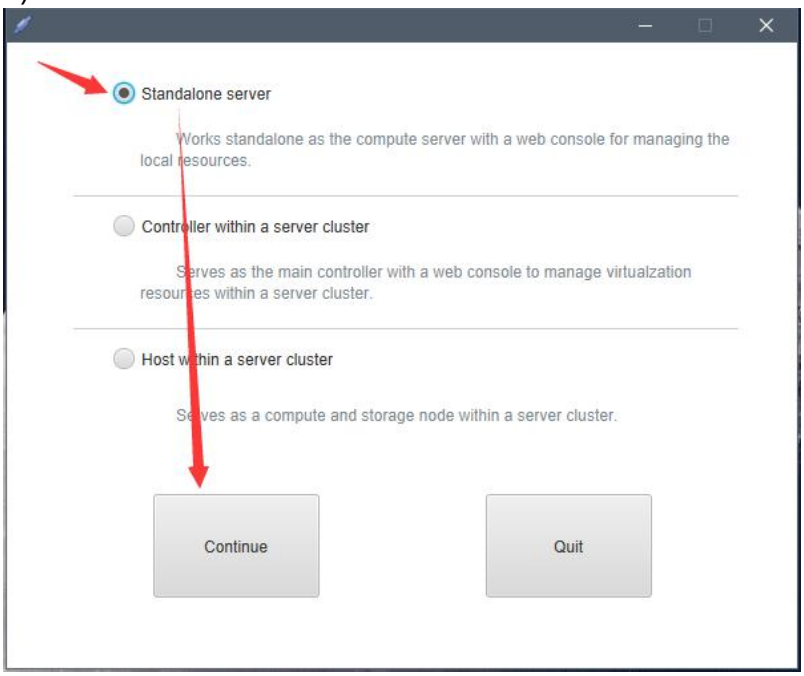
3. Install JoinVDI Node

1) Windows computer and server connect to the same network
2) Run the **Quick Installation Tool**
3) Enter the Host IP (Server IP) and Host password (root password), Click **Install** to start installation.

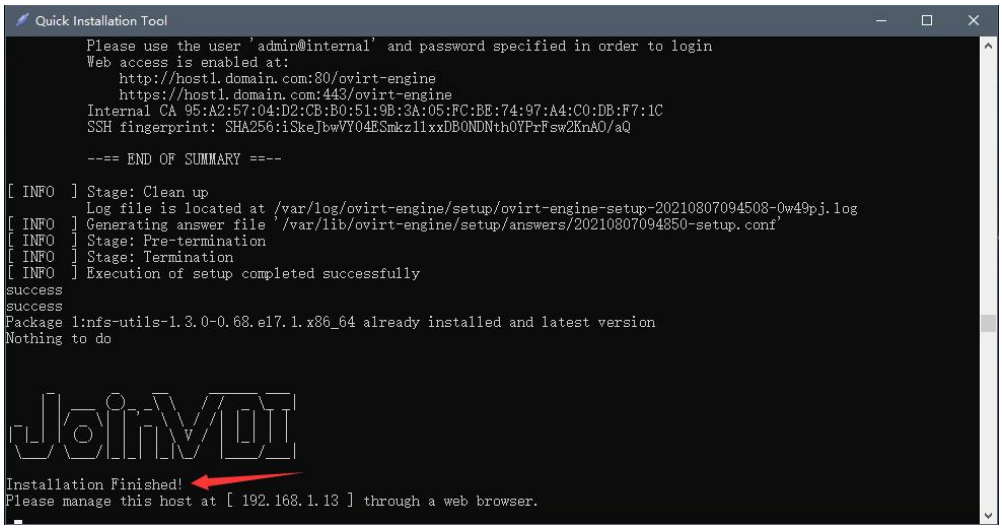
- The lastest **admin password** is the default password of JoinVDI admin manager.



4) Select **Standalone server** → **Continue**



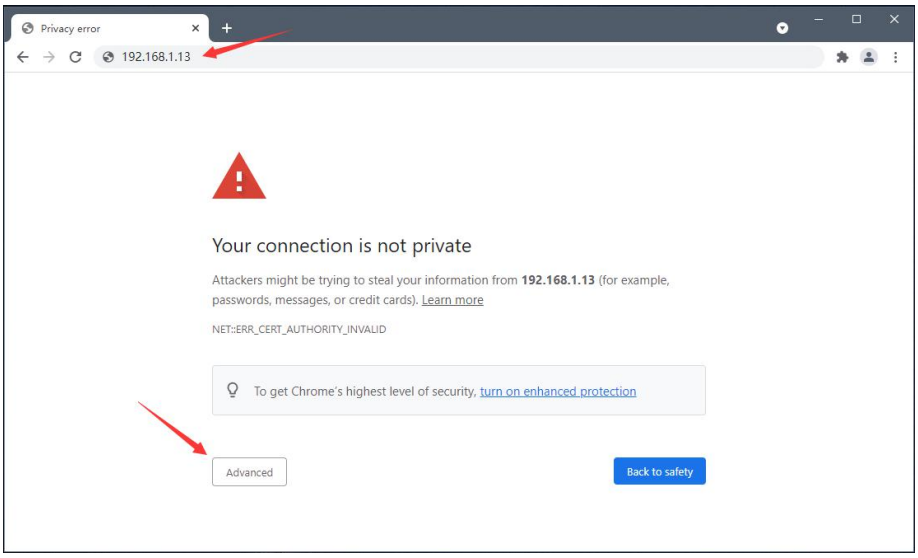
5) When prompt **Installation Finished!** in the Quick Installation Tool window, the installation is complete.

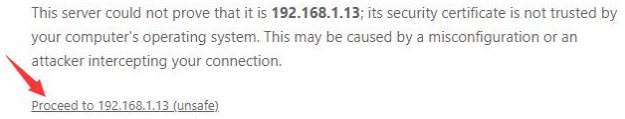


4. Configure JoinVDI Platform

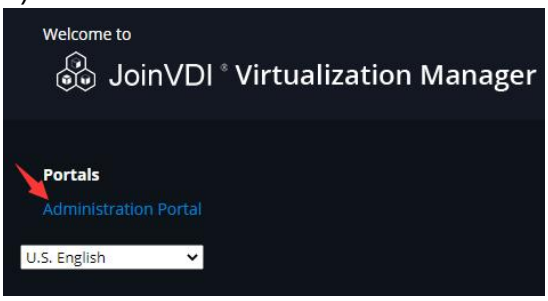
4.1 Connecting to the Administration Portal

1) Run the Chrome in Windows computer and navigate to **https://server IP**. Click **Advanced** and **Proceed to the site**

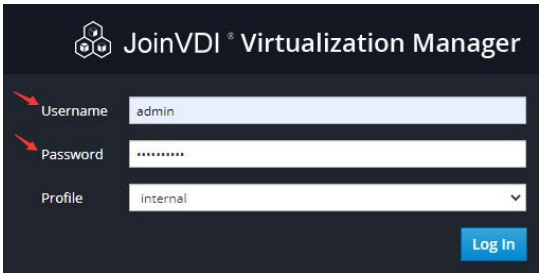




2) Click **Administration Portal**

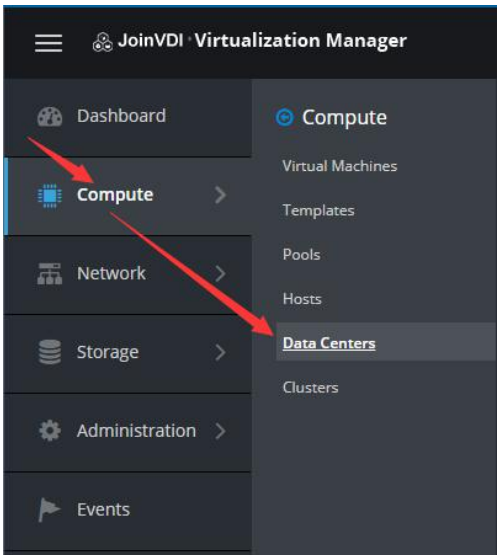


3) Use the user name **admin** along with the password **admin@jvvm**, click **Log In**

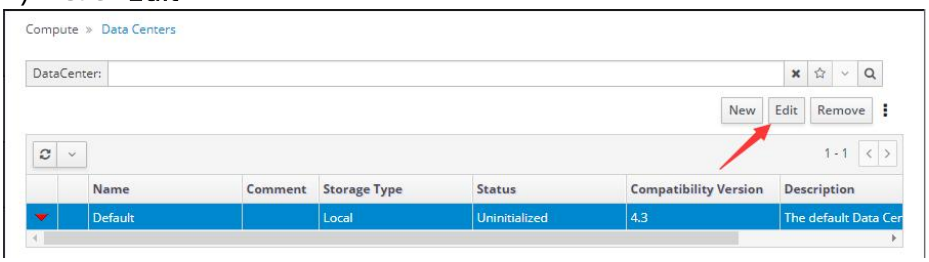


4.2 Configure the data center

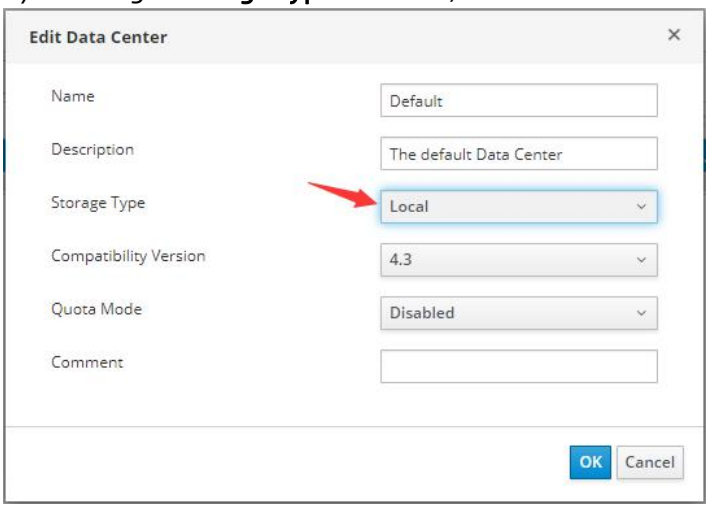
1) Click **Compute** → **Data Centers** on the left



2) Click **Edit**

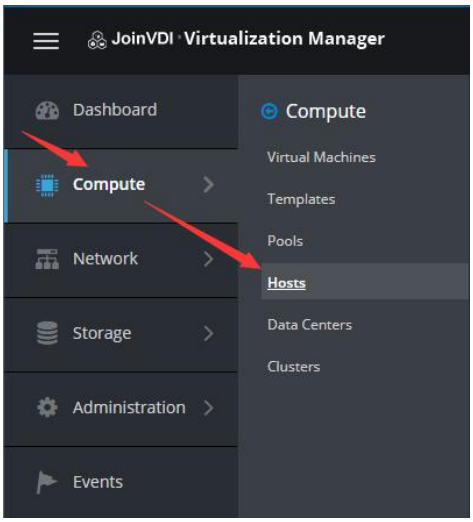


3) Change **storage type** to **Local**, and click **OK**

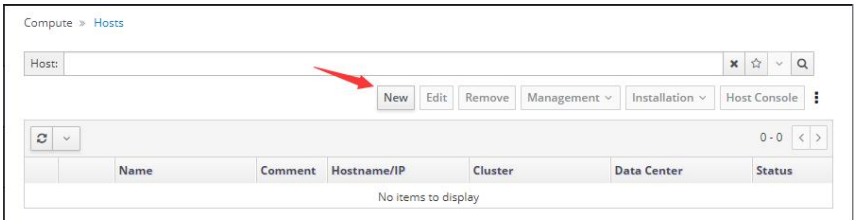


4.3 Add a host

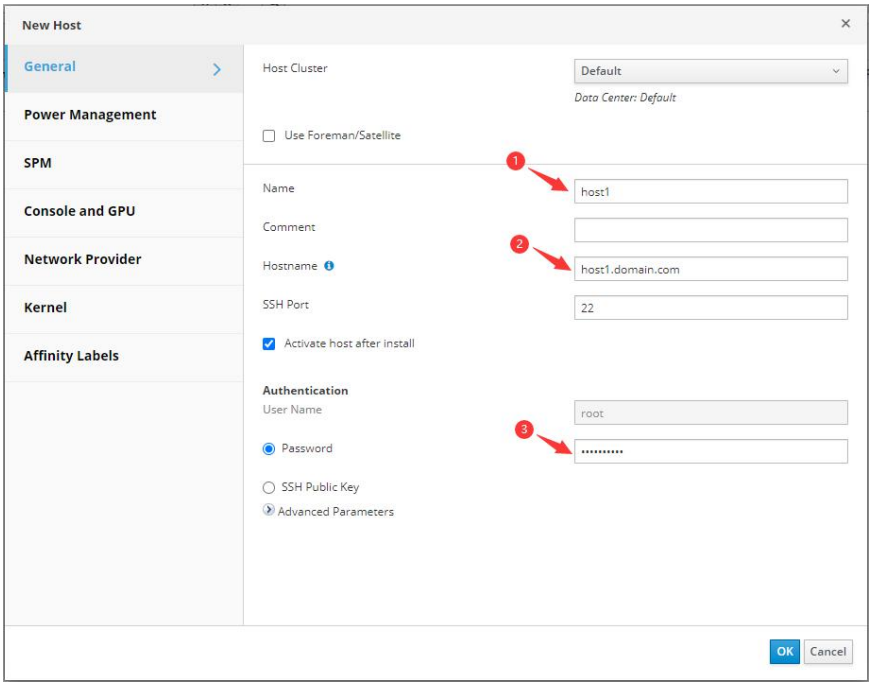
1) Click **Compute** → **Hosts** on the left



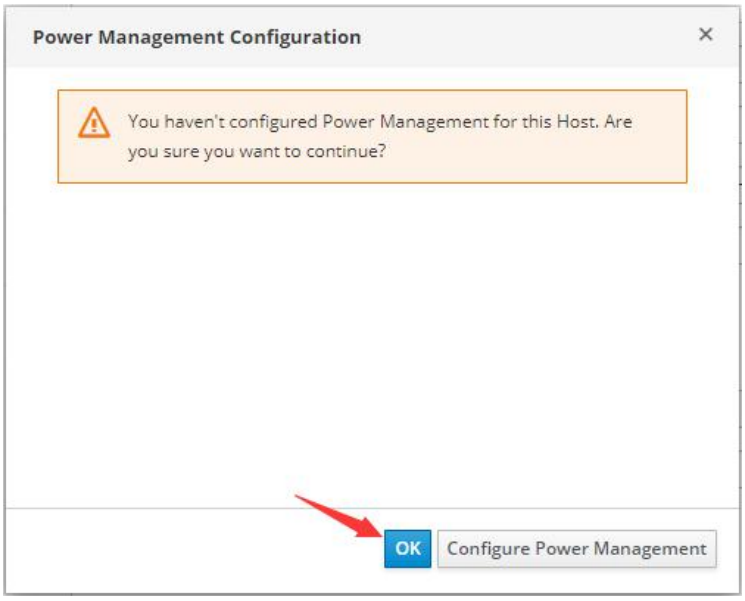
2) Click **New**



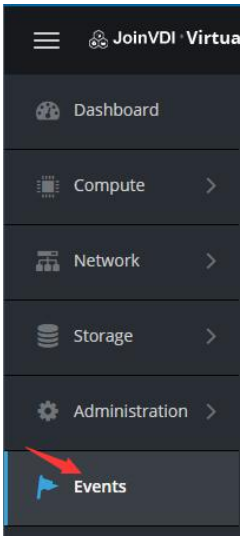
3) Enter a host name in the **Name** field, Host Name set when installing system in the **Hostname** field, and root password in the **Password** filed, click **OK**



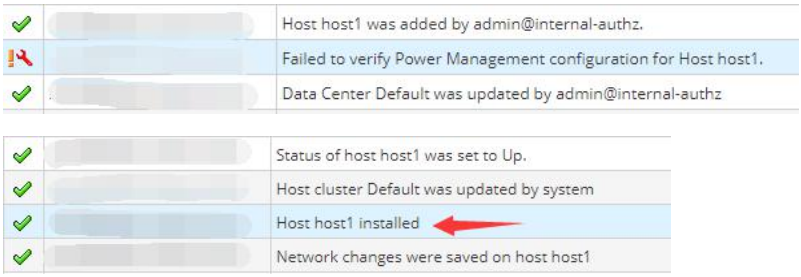
4) Ignore the power management configuration prompt and click **OK** to start installation.



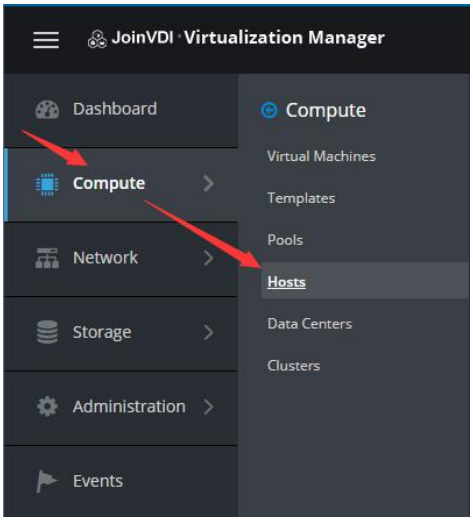
5) View the progress of the installation in the **Events**



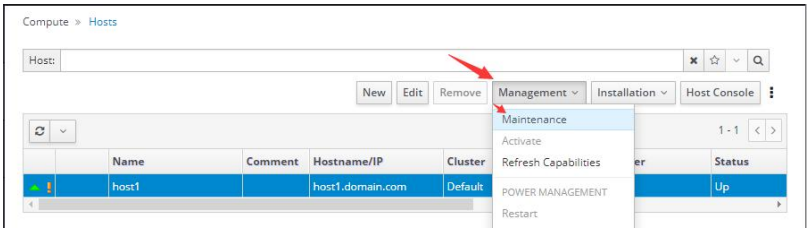
6) The installation is successful if there are no any errors except the notification of Power Management configuration and prompt **Host xxx installed**



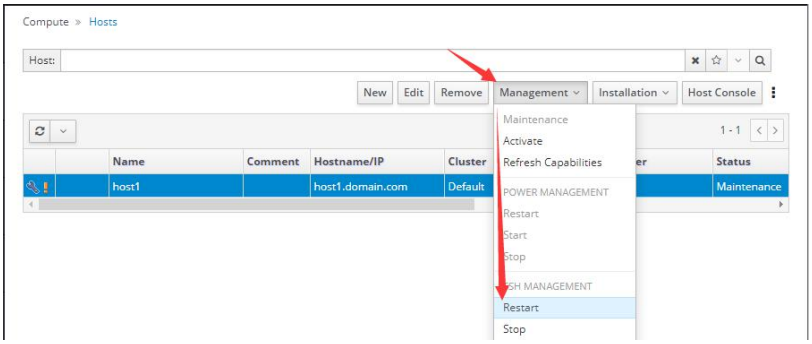
7) Click **Compute** → **Hosts**



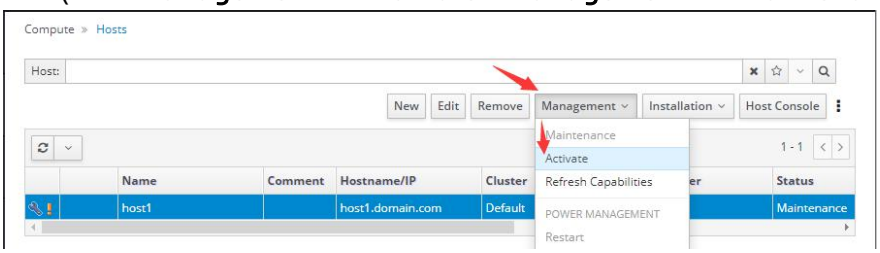
8) Click **Management** → **Maintenance**, the host turn to maintenance mode



9) Click **Management** → **Restart** → **OK** to restart the host

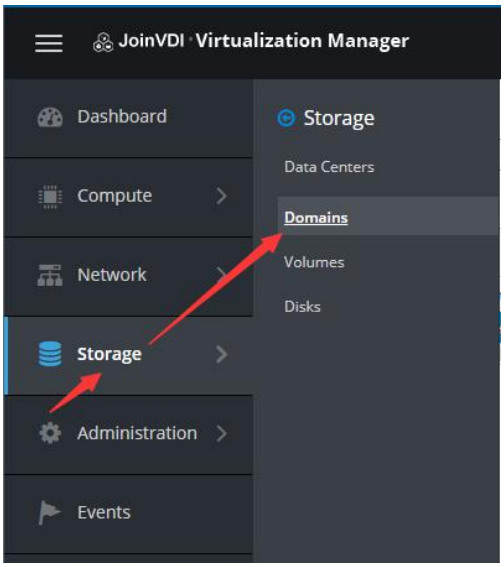


10) Log into the administration portal after reboot, to active the host
(Click **Management** → **Activate** / **Management** → **Maintenance** → **Activate**)

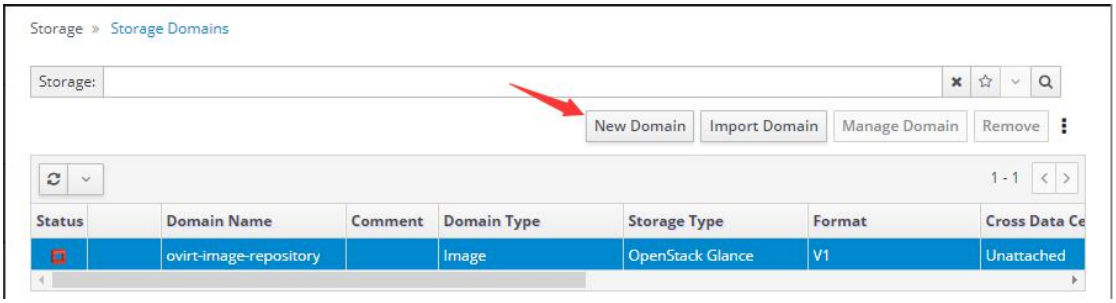


4.4 Add the storage domain

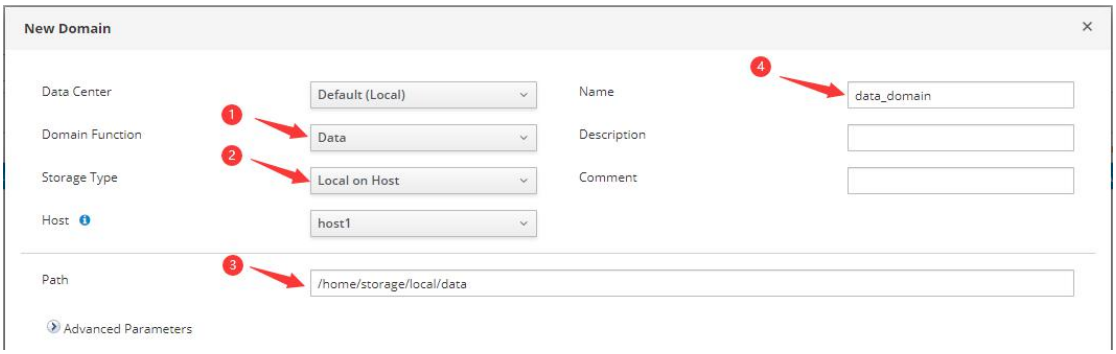
1) Click **Storage** → **Domains** on the left



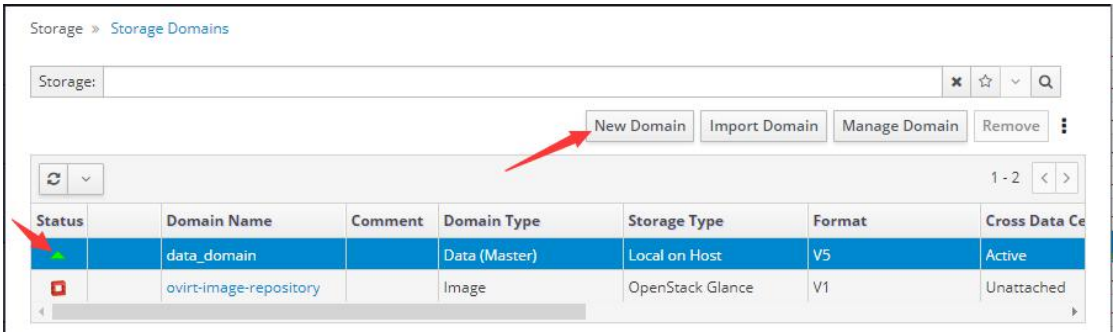
2) Click **New Domain**



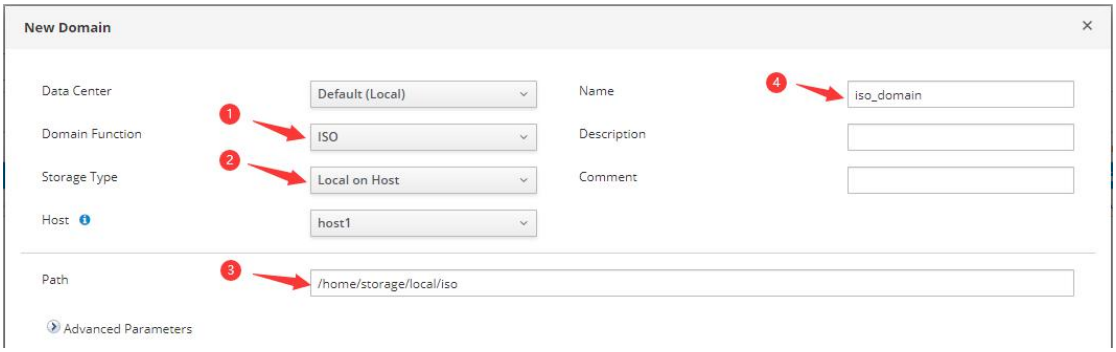
3) Change the **Domain Function** to **Data**, Change the **Storage Type** to **Local on Host**, enter the **Path** to be used for the storage domain (**/home/storage/local/data**), enter a name, e.g. **data_domain** → **OK**



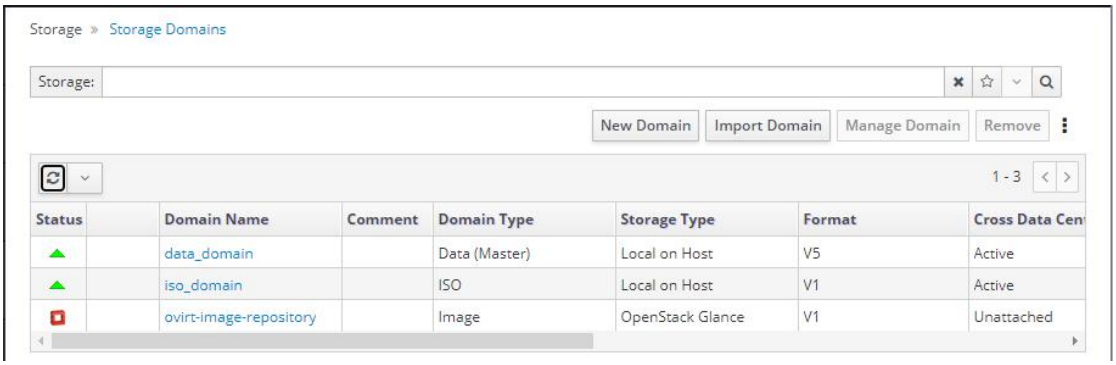
4) Click **New Domain** again after the first storage domain turn into green.



5) Change the **Domain Function** to **ISO**, Change the **Storage Type** to **Local on Host**, enter the **Path** to be used for the storage domain (**/home/storage/local/iso**), enter a name, e.g. **iso_domain** → **OK**.



6) The **Status** of **data_domain** and **iso_domian** in the list are both green, means the basic storage domain is created completely.



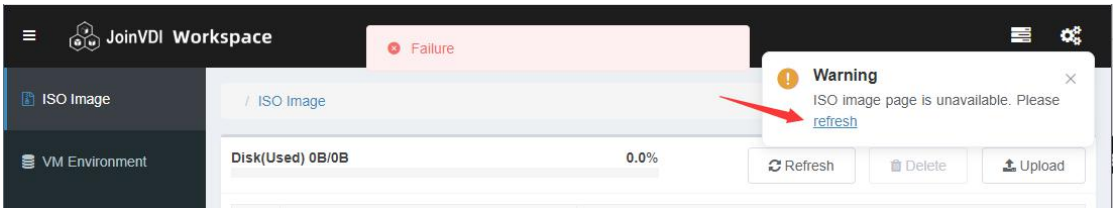
- **/home/storage/local/data** and **/home/storage/local/iso** are the preset path, and the path must be entered correctly.
- If you need to add a new hard disk as storage domain, please refer to Appendixes 6.2 Add a hard disk to server.

5. Create Virtual Machines

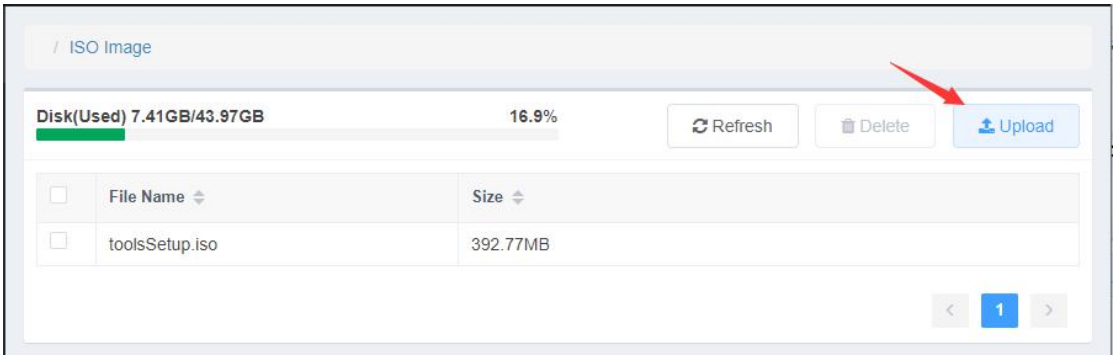
5.1 Create virtual machines

5.1.1 Upload Windows system ISO image

1) Navigate to **https://[Host IP]:8080**, e.g. **https://192.168.1.13:8080**
2) The first time to visit it, ISO image page need to be refreshed.



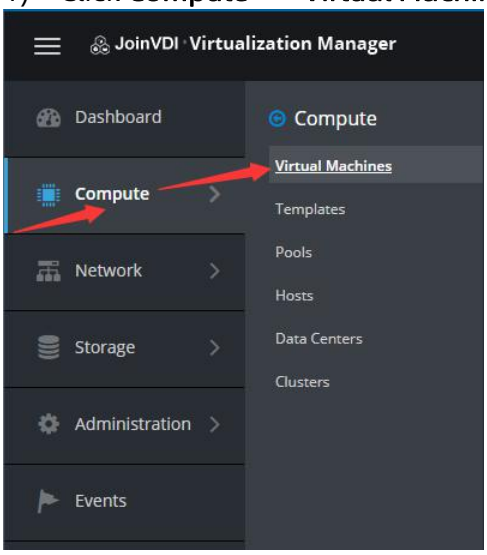
3) Click **Upload**. Upload the Windows system ISO. Please upload the Microsoft original image.



4) Wait for upload completed.

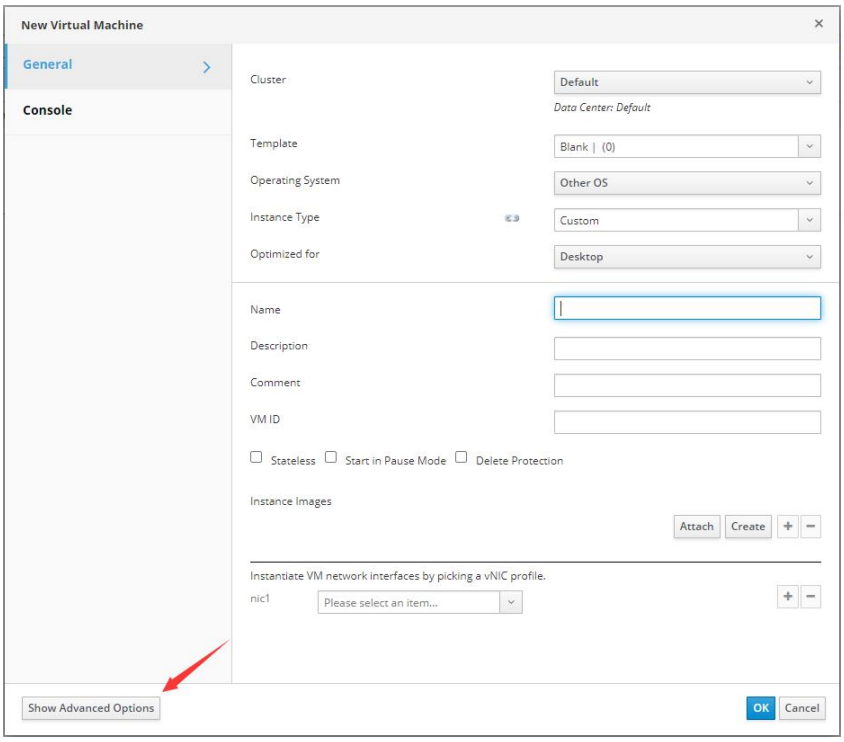
5.1.2 Create a virtual machine

1) Click **Compute** → **Virtual Machines**

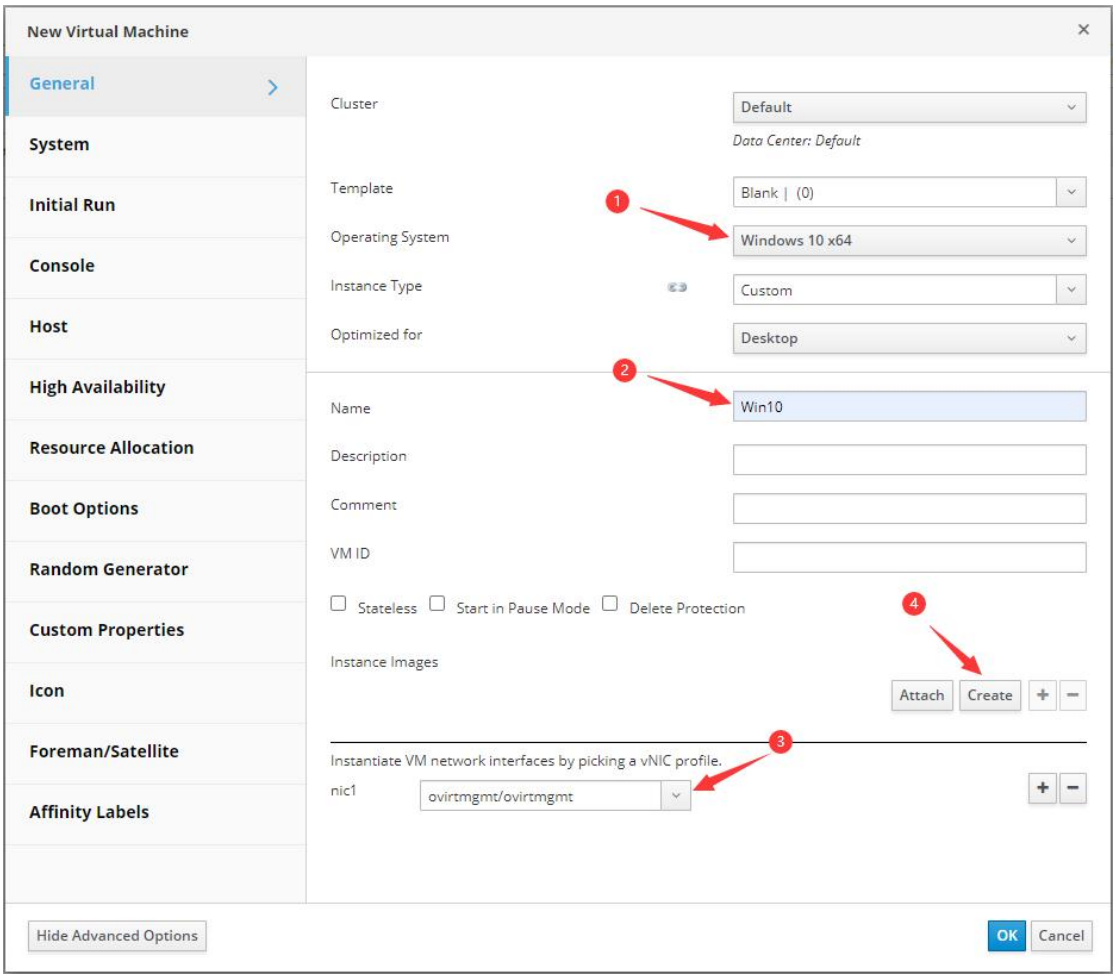


2) Click **New**. This opens the **New Virtual Machine** window

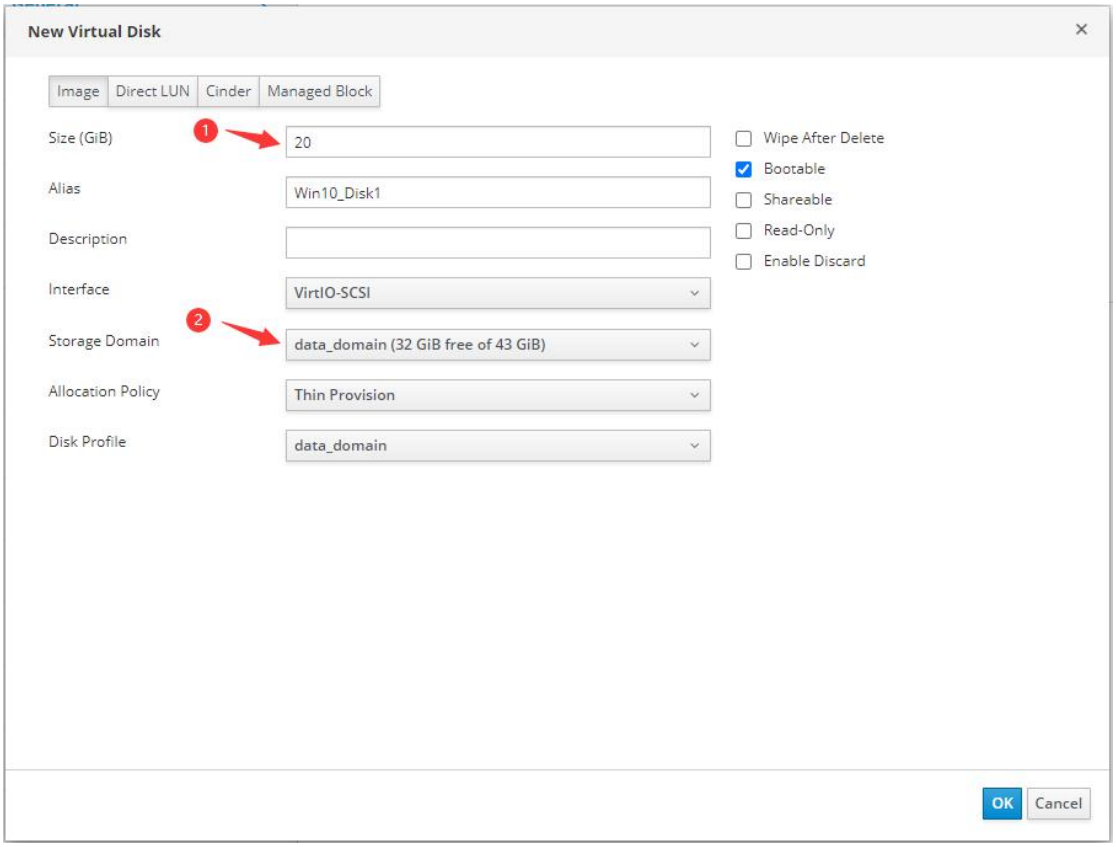
3) Click "Show Advanced Options".



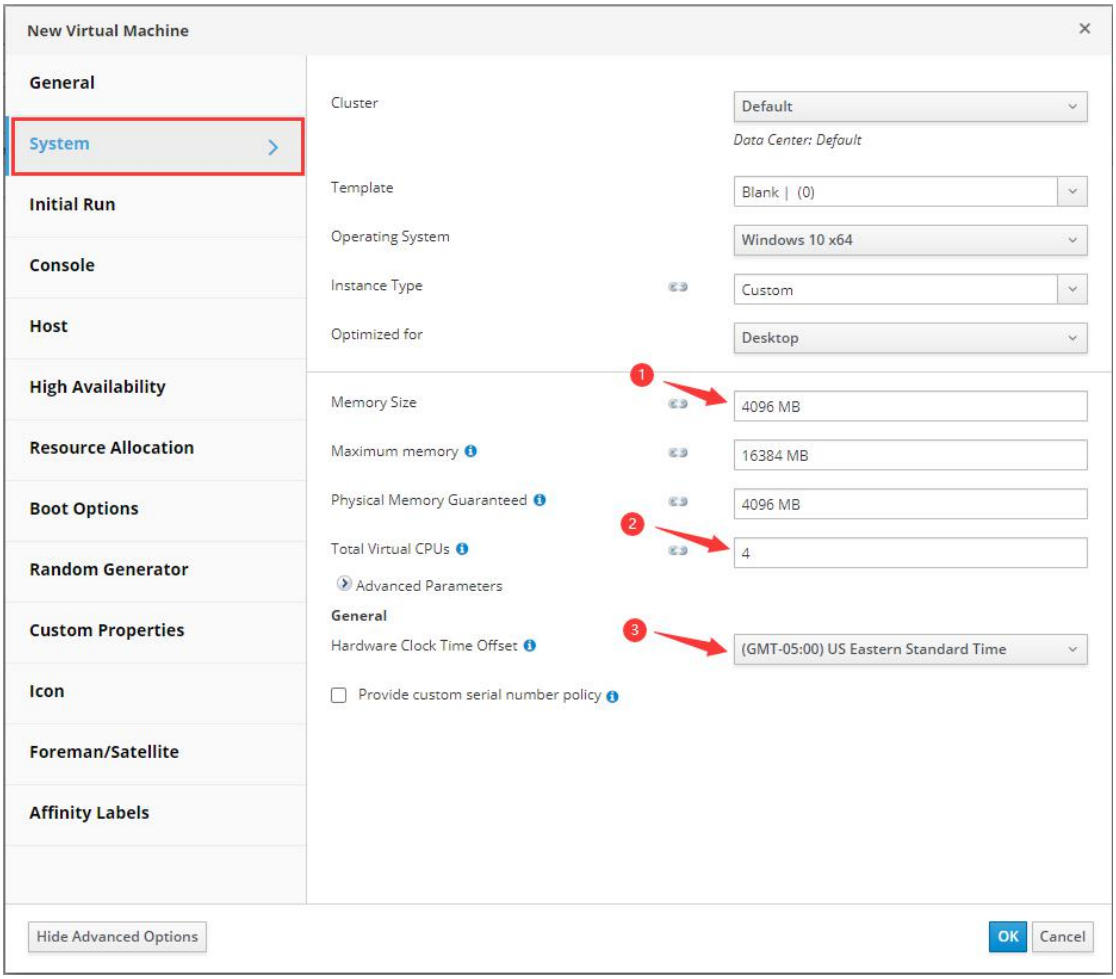
4) Select an **Operating System** from the drop-down list, e.g. **Windows 10 x64**
Enter a **Name** for the virtual machine, e.g., **Win10**
Add a network interface from the **nic1** drop-down list;
Create a virtual disk.



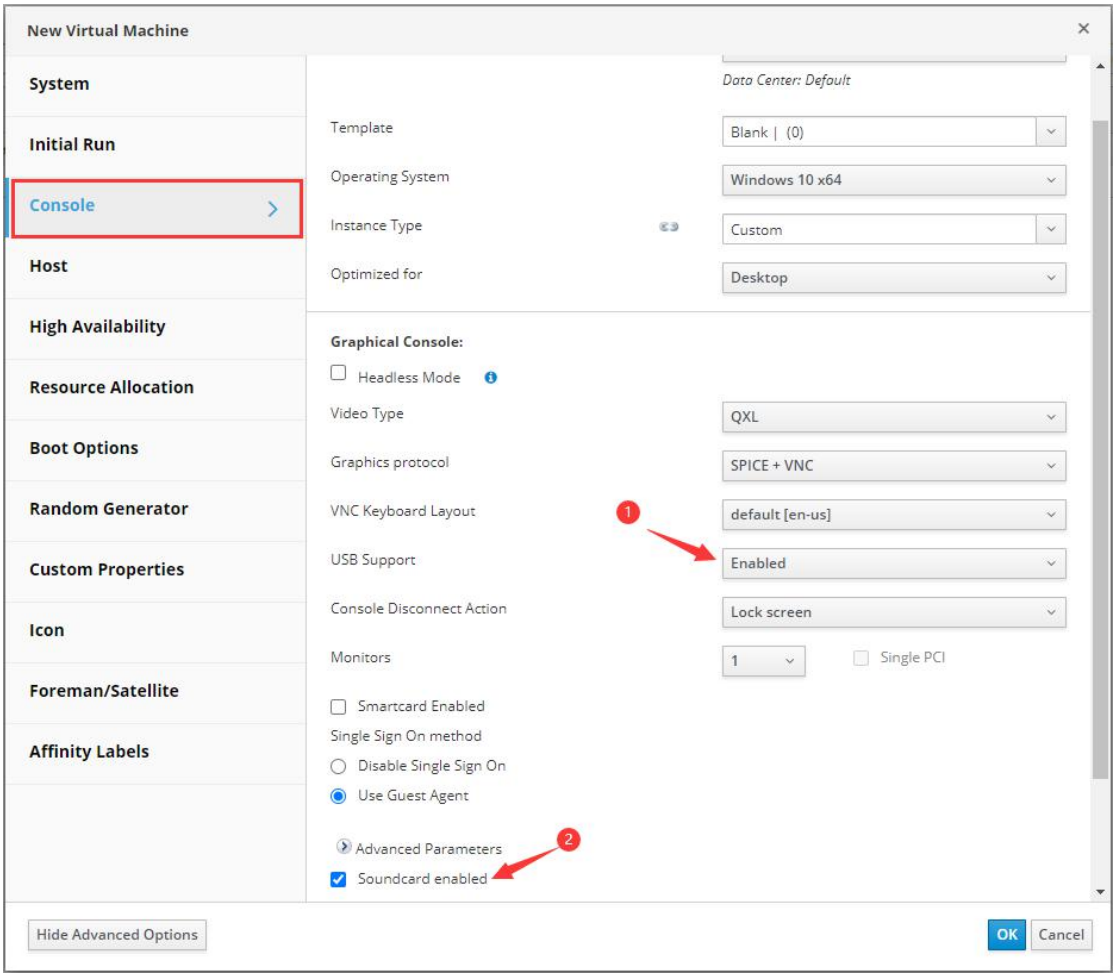
5) Create the first disk as a **Bootable** disk. Enter a **Size(GB)** according to actual needs. E.g. **20** GB. Select the **storage domain** in which the virtual disk will be stored, click **OK**



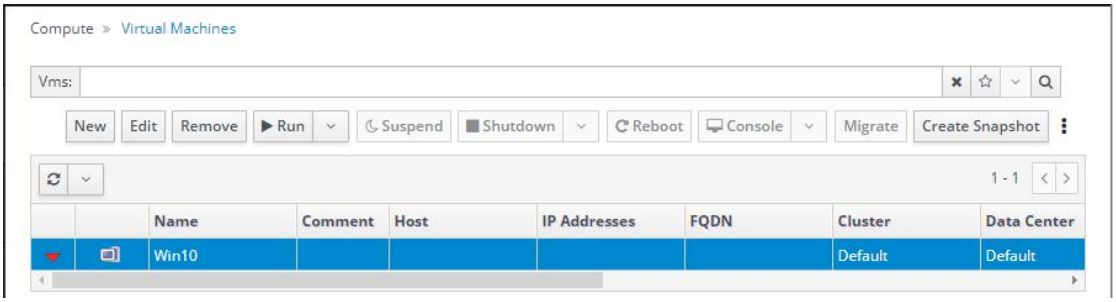
6) Click **System**, specify the virtual machine's **Memory Size**, e.g. 4096 MB
Specify the virtual machine's **Total Virtual vCPUs**, e.g., 4.
Select your local time zone in **Hardware Clock Time Offset**, e.g. **(GMT-05:00) US Eastern Standard Time**



7) Click **Console**, **Enabled** the **USB Support**, check **Soundcard enabled**

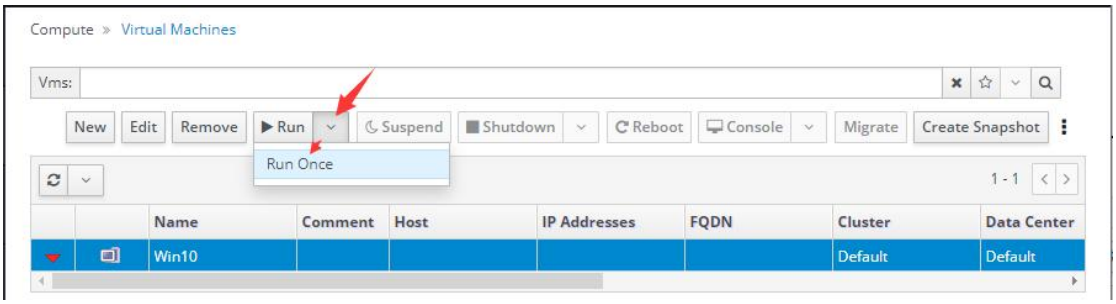


8) Click **OK** to create a new virtual machine

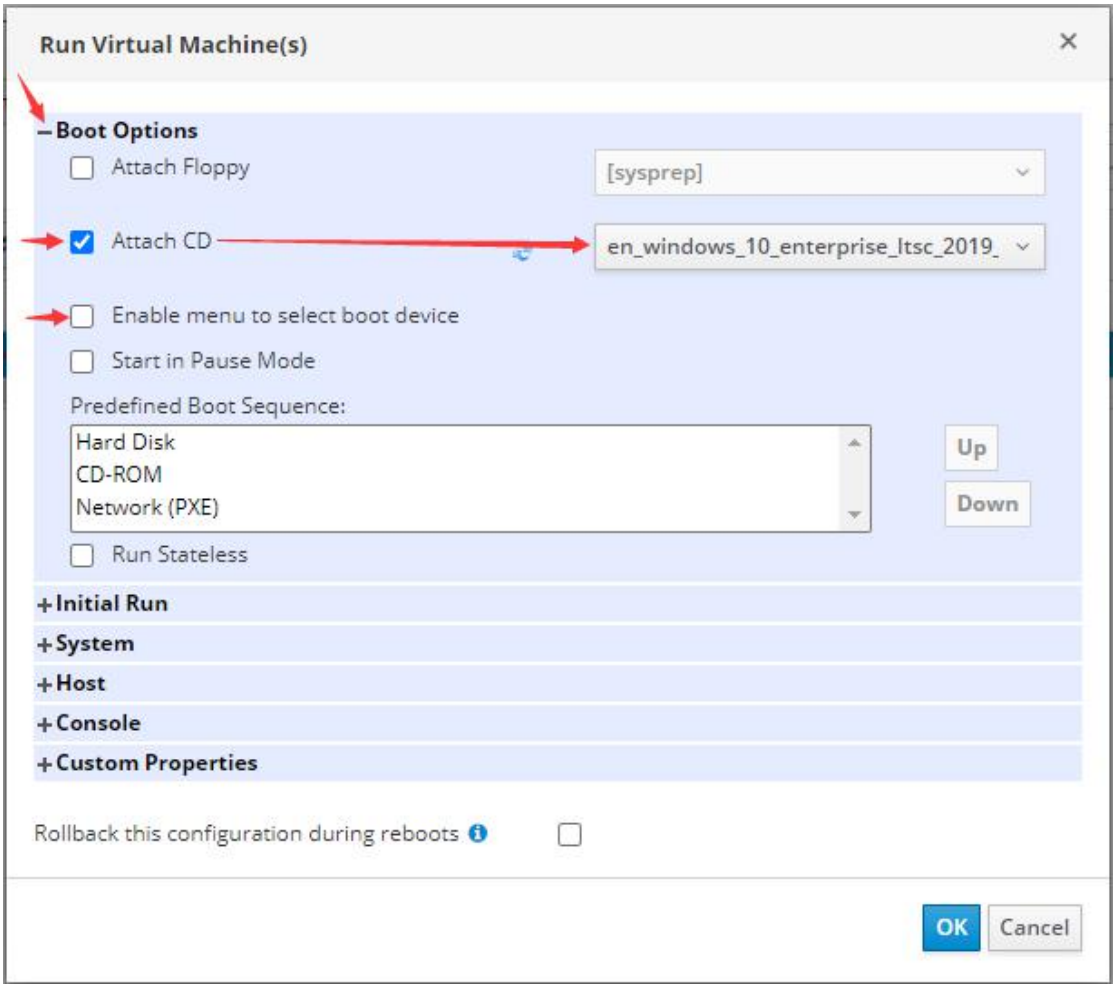


5.1.3 Install OS

1) Select the virtual machine, click **Run** → **Run once**

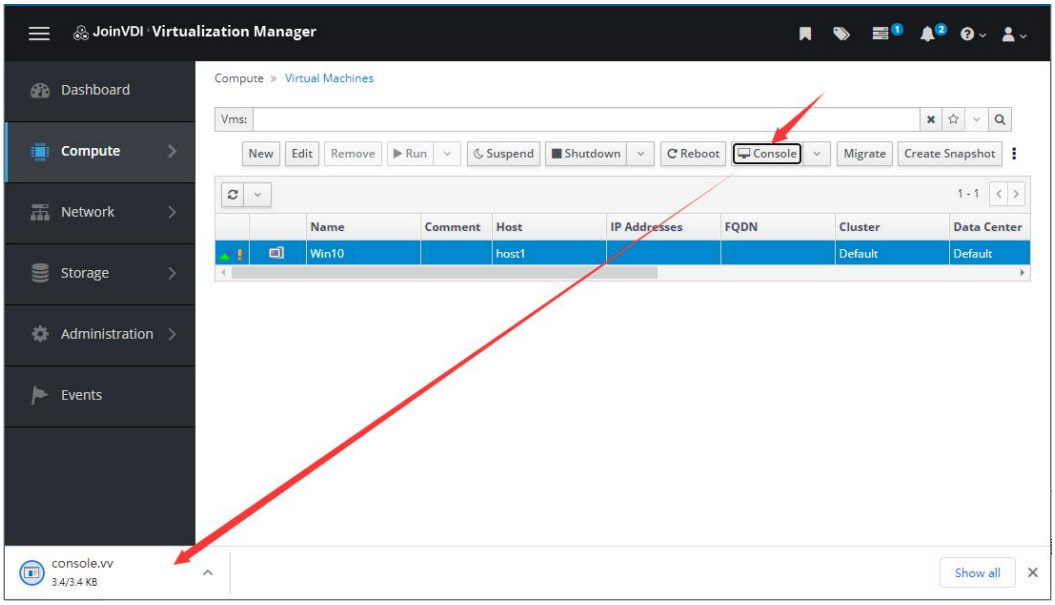


2) Expand the **Boot Options** menu, select the **Attach CD** check box, and select a Windows ISO from the drop-down list → uncheck **Enable menu to select boot device** → Click **OK**, the virtual machine will boot up immediately.

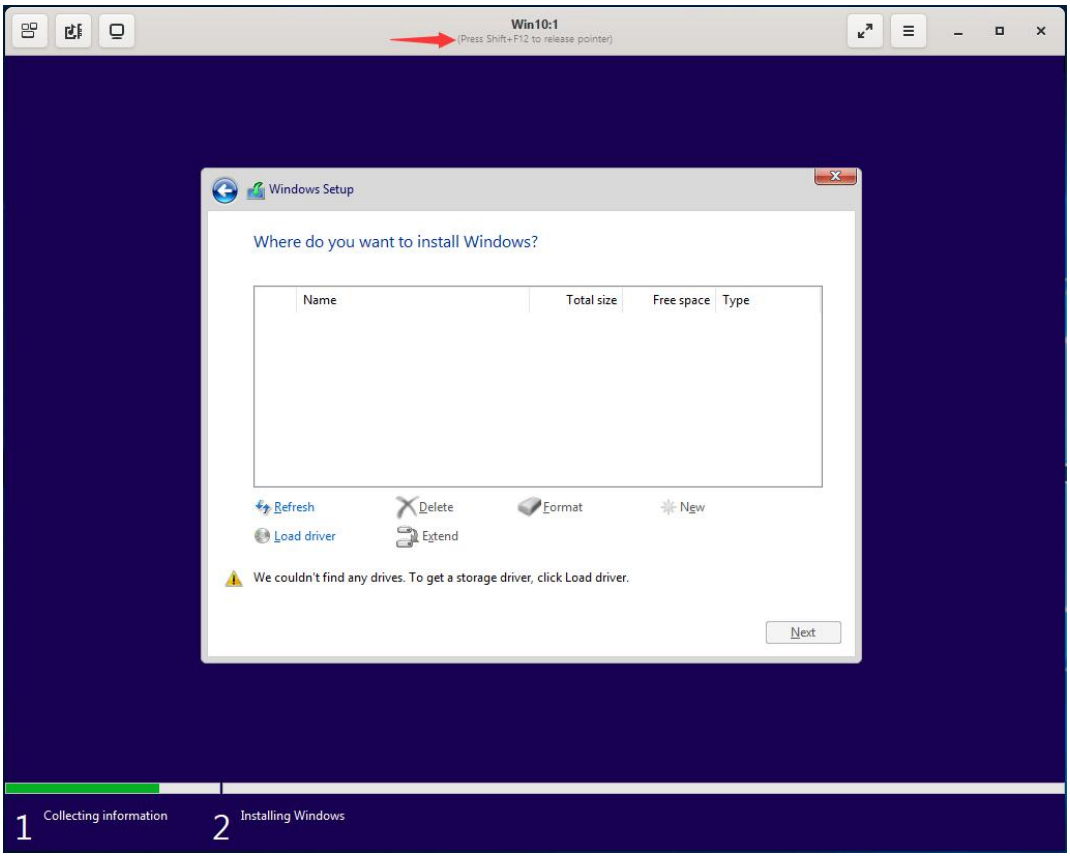


3) Select the virtual machine, click the **Console**, and a file name **console.vv** will be downloaded. Click to open the screen of the virtual machine console

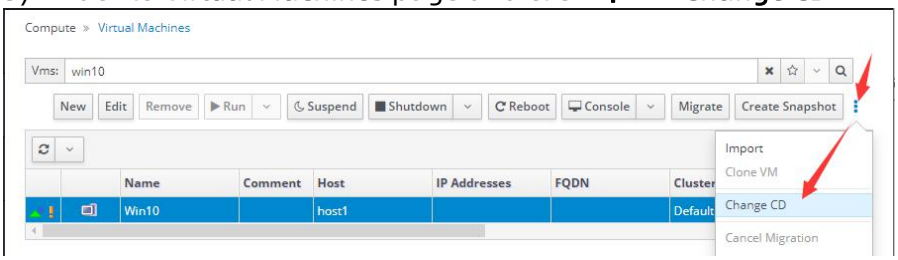
- Windows computer need to install **virt-viewer** in advance.



4) Please follow the common installation process of Windows system to install virtual machines. When prompted to select a drive onto which you want to install Windows. **Press Shift+F12 to release pointer**.



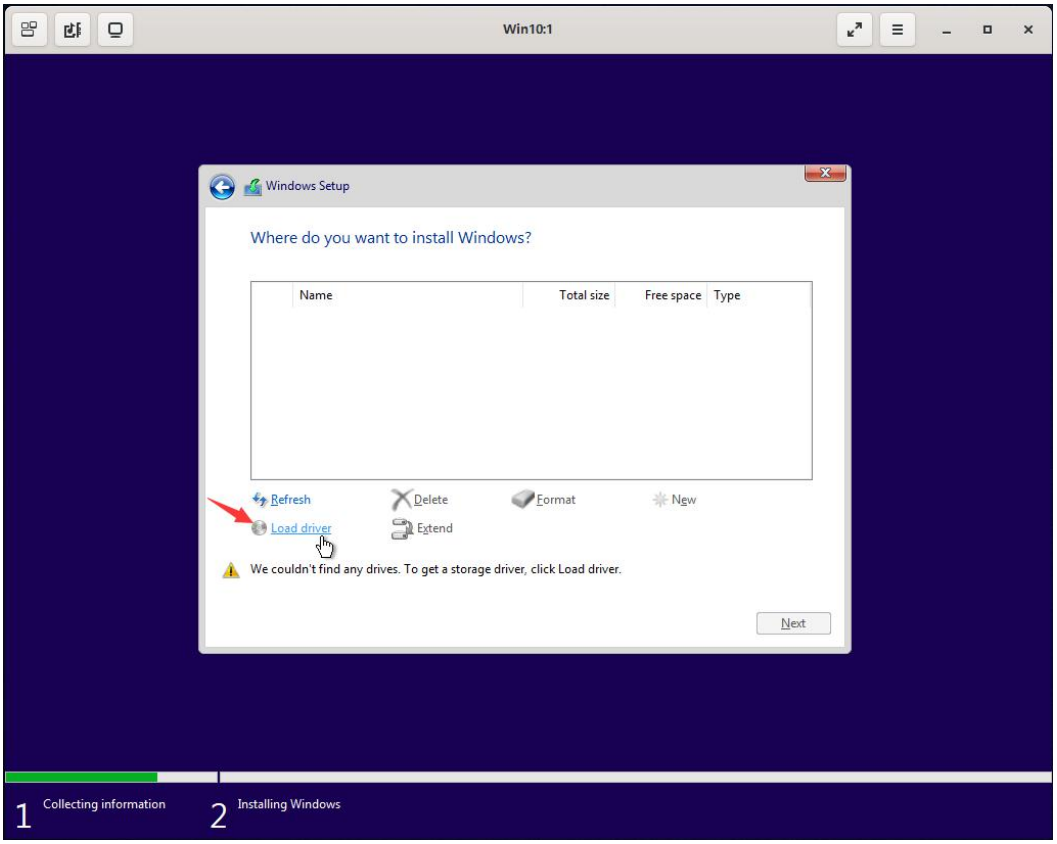
5) Back to **Virtual Machines** page and click ⋮ → **Change CD**



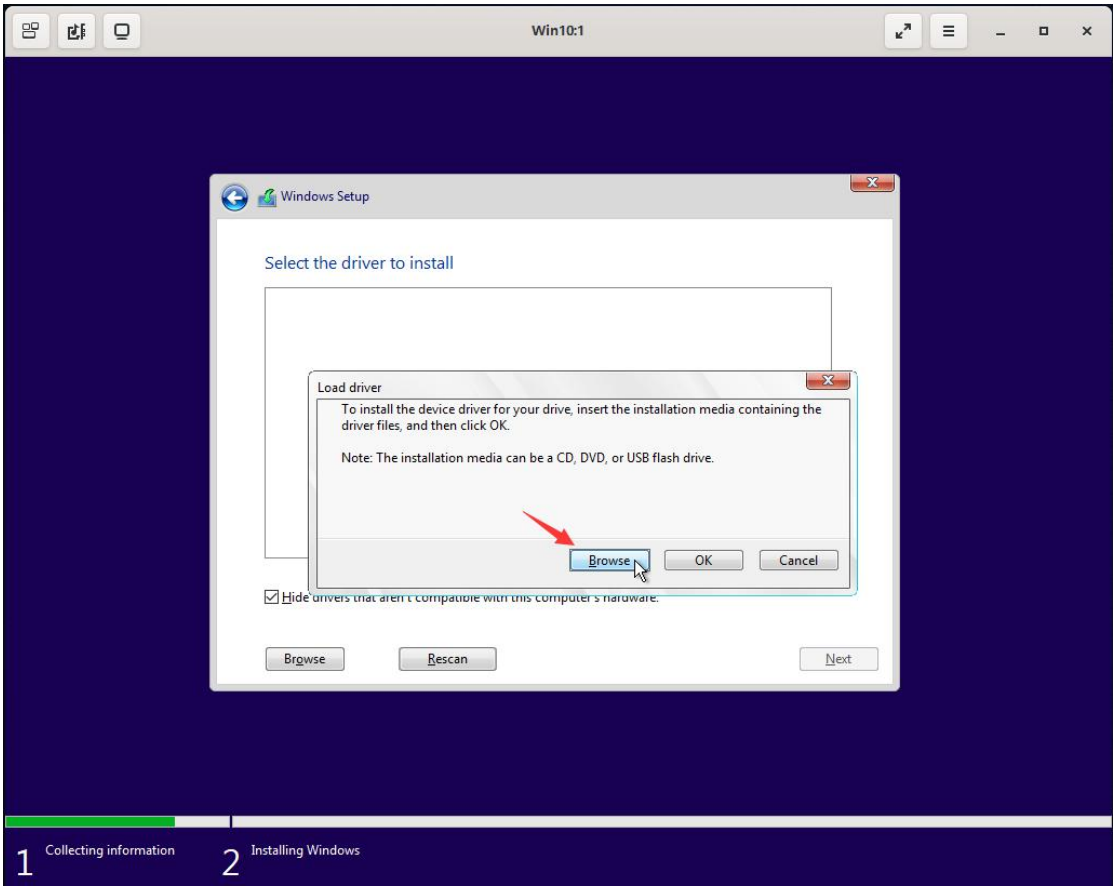
6) Change CD to **toolSetup.iso** → **OK**

7) Click the console icon to return to the console.

8) Click **Load driver**

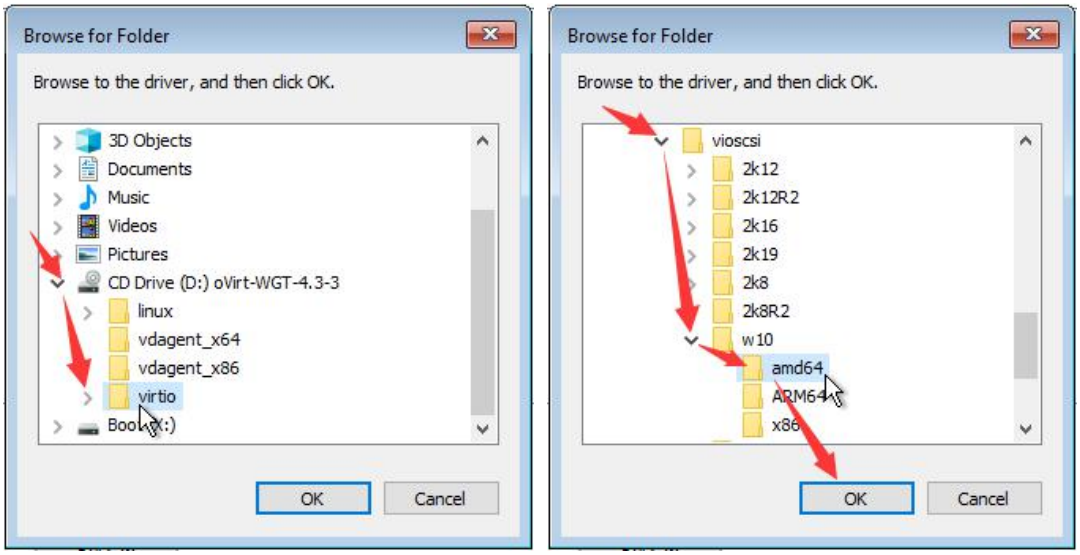


9) Click **Browse**

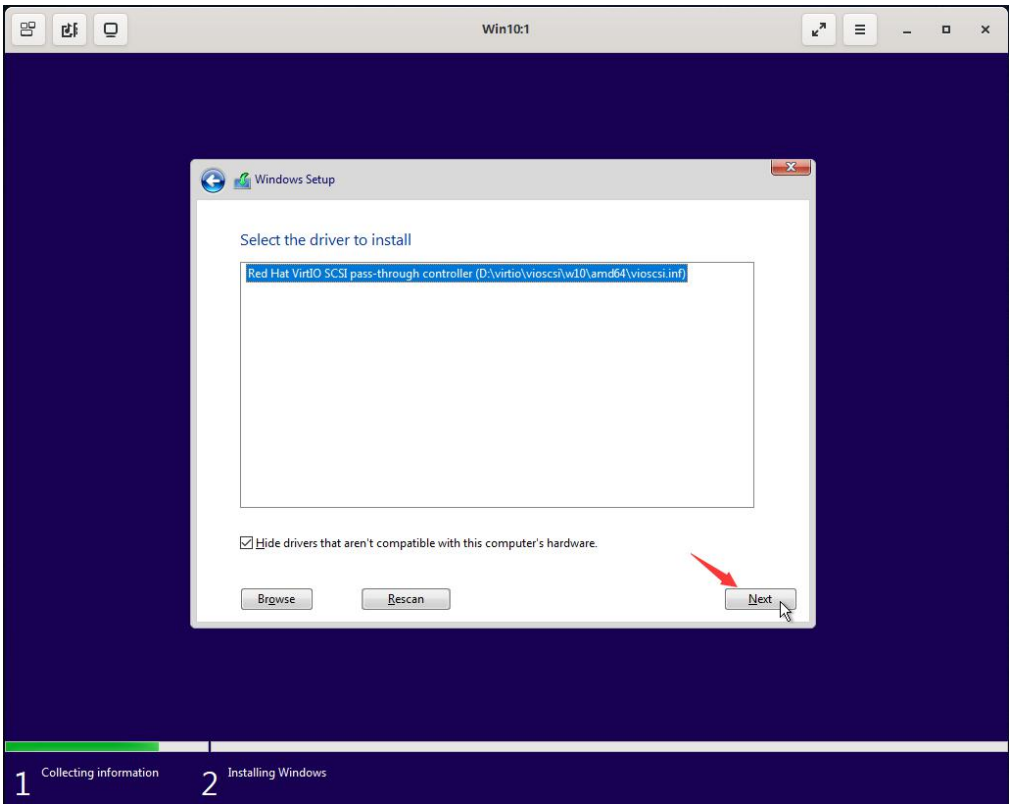


10) Unfold **CD Drive(D:)** → "**virtio** → **vioscsi** → select the driver of the current virtual machine system (e.g., **win10 x64**)

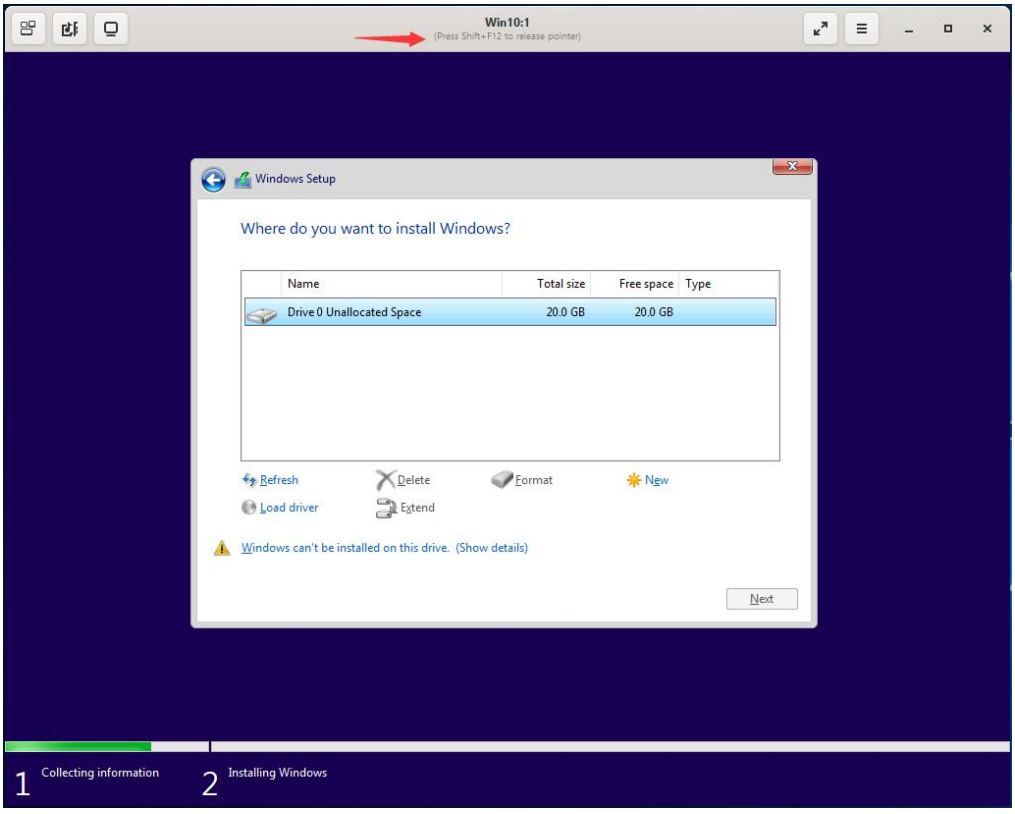
- The x86 folder for the 32-bit system, and amd64 folder for 64-bit system.



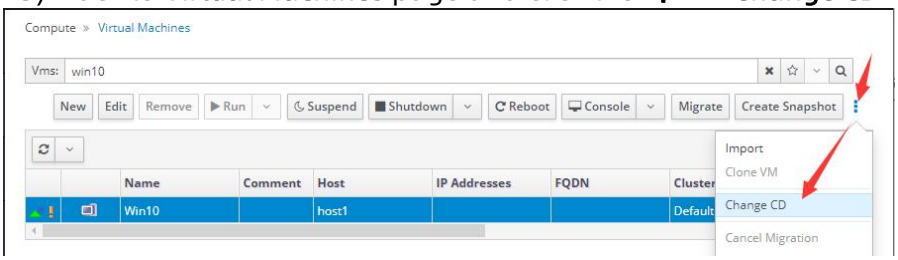
11) Click **Next** to begin install disk driver



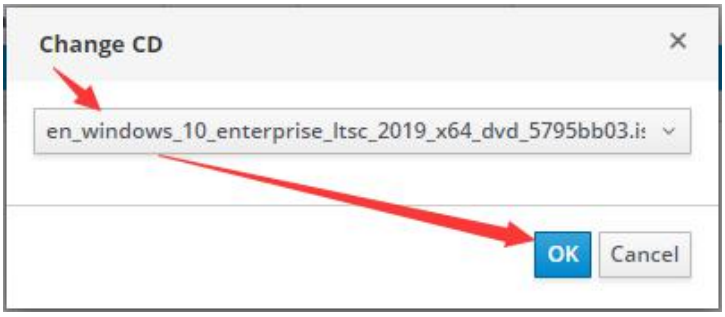
12) After the installation is completed, you can see the drive in the list. **Press Shift+F12 to release pointer**



13) Back to **Virtual Machines** page and click the ⋮ → **Change CD**

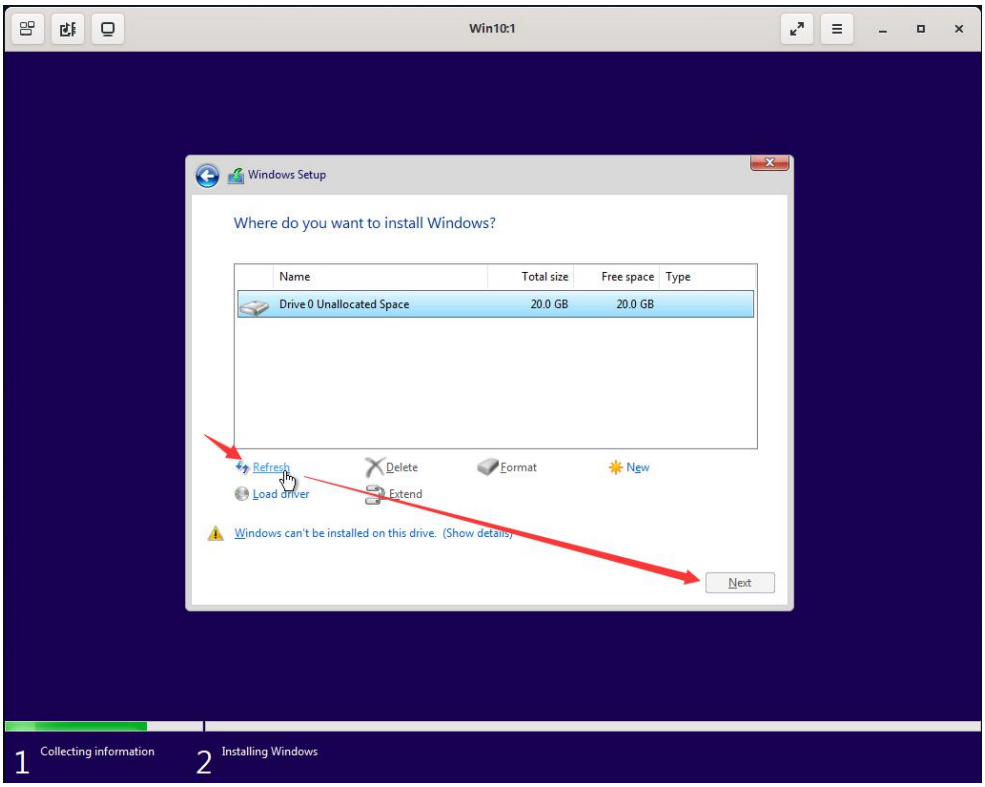


14) Change CD to Windows system ISO image → **OK**



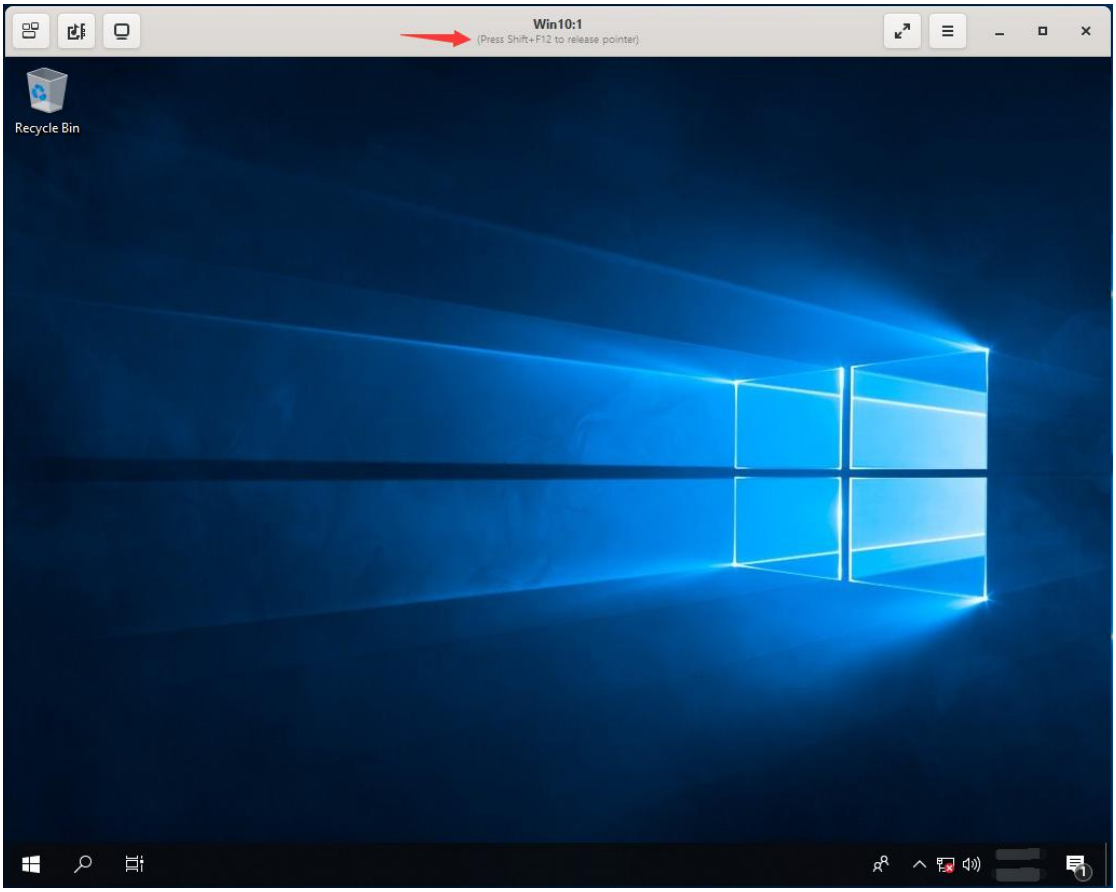
15) Click the console icon to return to the console.

16) Click **Refresh** →Click **Next**, and then continue to install system

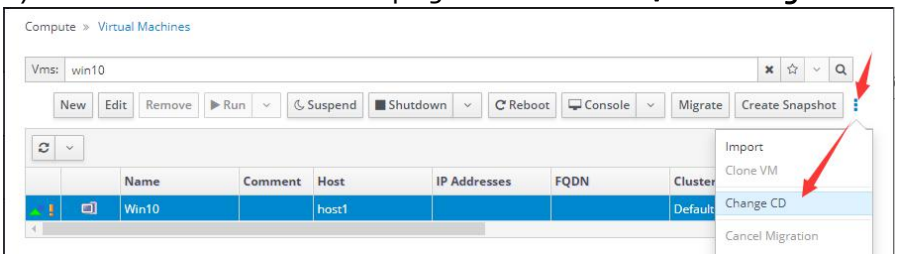


5.1.4 Completing system driver

1) After the installation is completed, it will automatically enter the system. **Press Shift+F12 to release pointer**



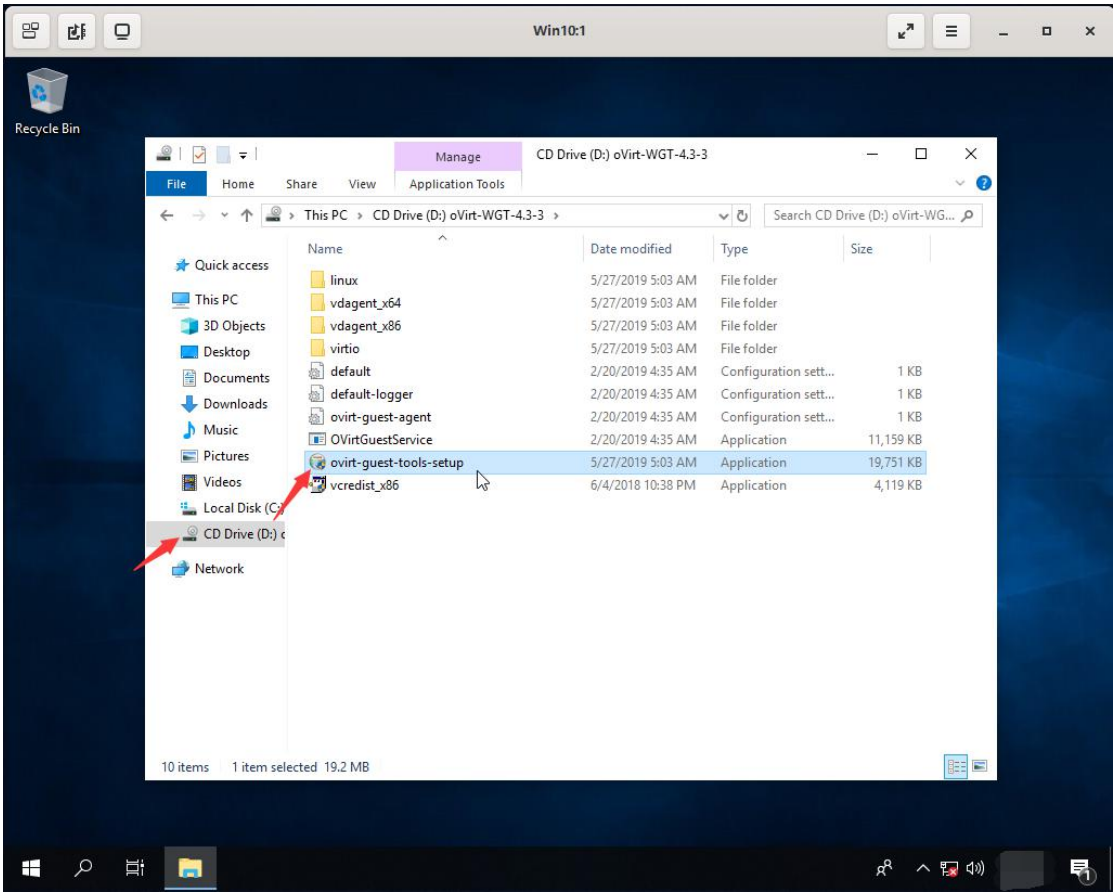
2) Back to **Virtual Machines** page and click the ⋮ → **Change CD** .



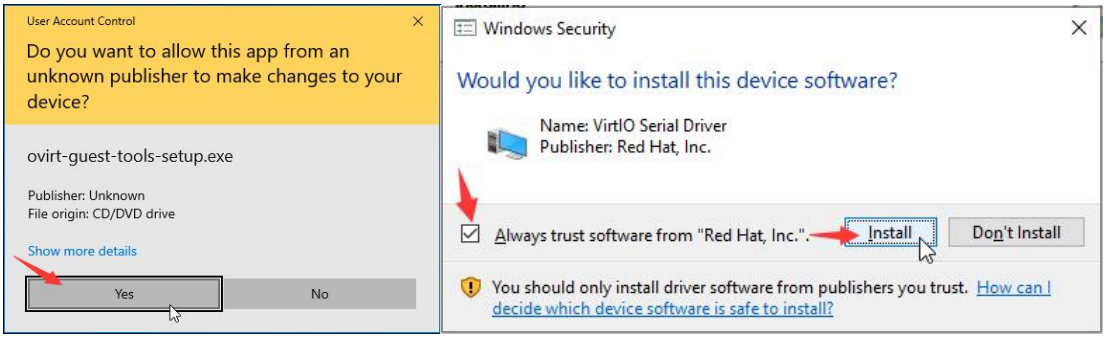
3) Change CD to **toolsSetup.iso** → **OK**

4) Click the console icon to return to the console.

5) Open **CD drive (D:)**, run **ovirt-guest-tools-setup.exe**, install the system drivers

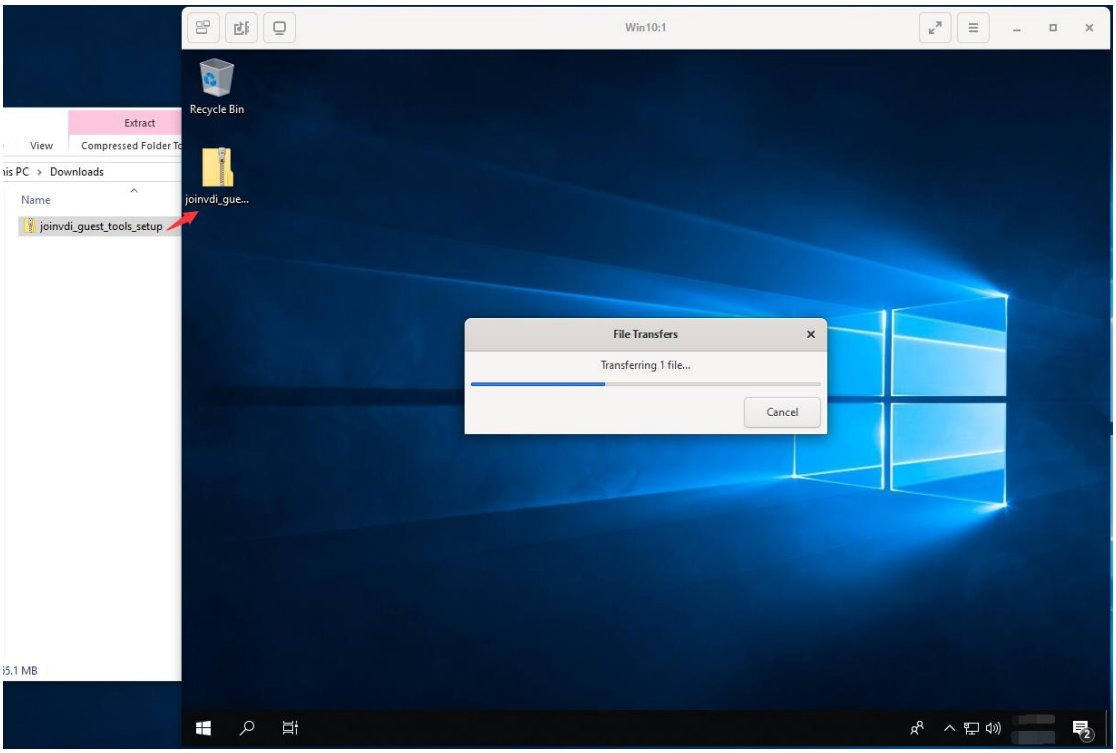


6) Click **Yes/Intsall** by default during the installation process, finally click **Finish** to complete the installation.

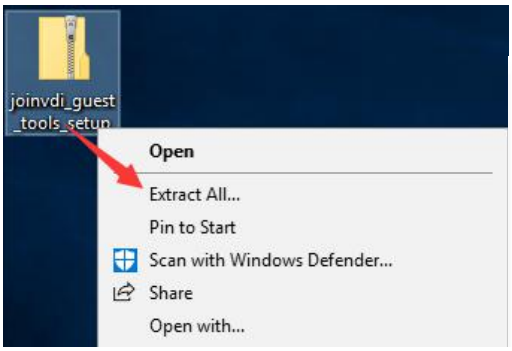


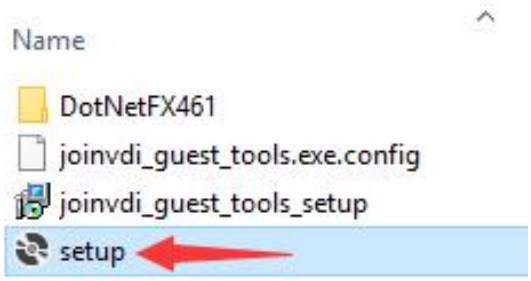
5.1.5 Install JoinVDI guest tools plug-in

1) Drag the file **Joinvdi_guest_tools_setup.zip** to the console from Windows computer

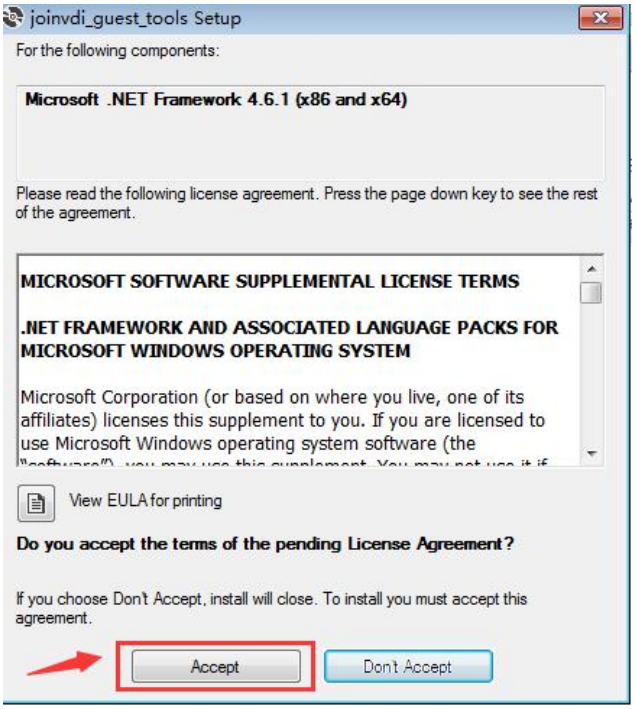


2) Unzip the file **Joinvdi_guest_tools_setup.zip**, open the folder and run the program **setup.exe**

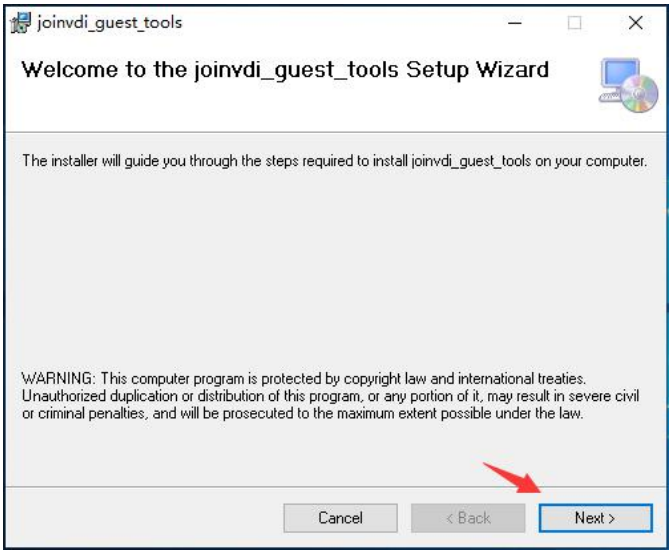




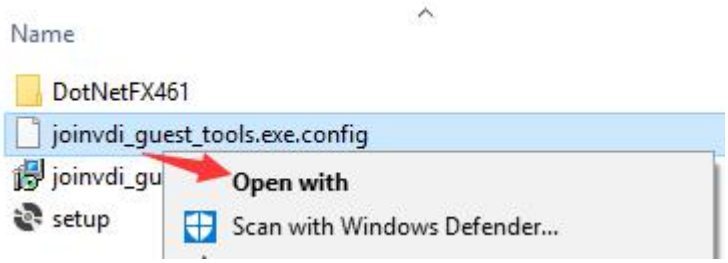
3) If you are running the **setup.exe** on a Windows 7, .NET4.6.1 need to be installed first.

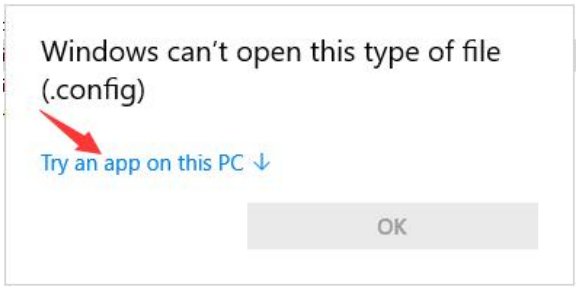


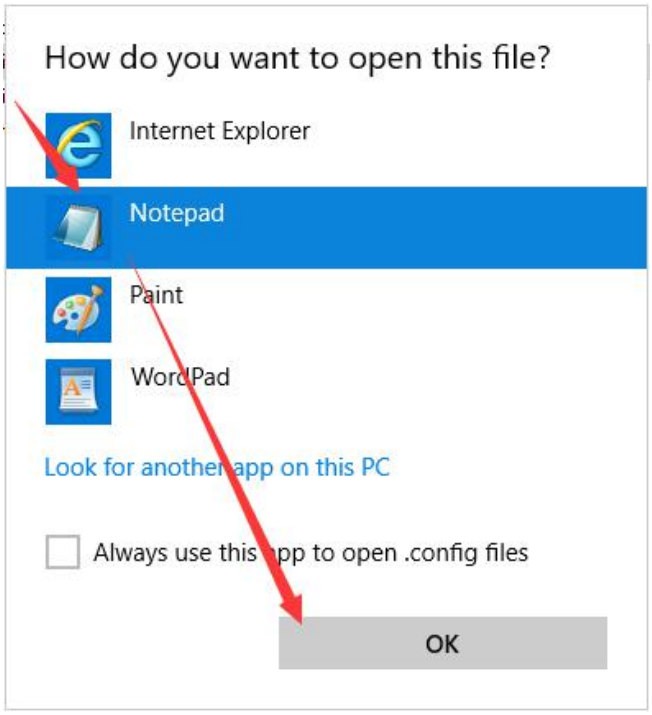
4) If you have already installed NET4.6.1, you can install **joinvdi_guest_tools** directly. Click **Next** by default until installation is complete.



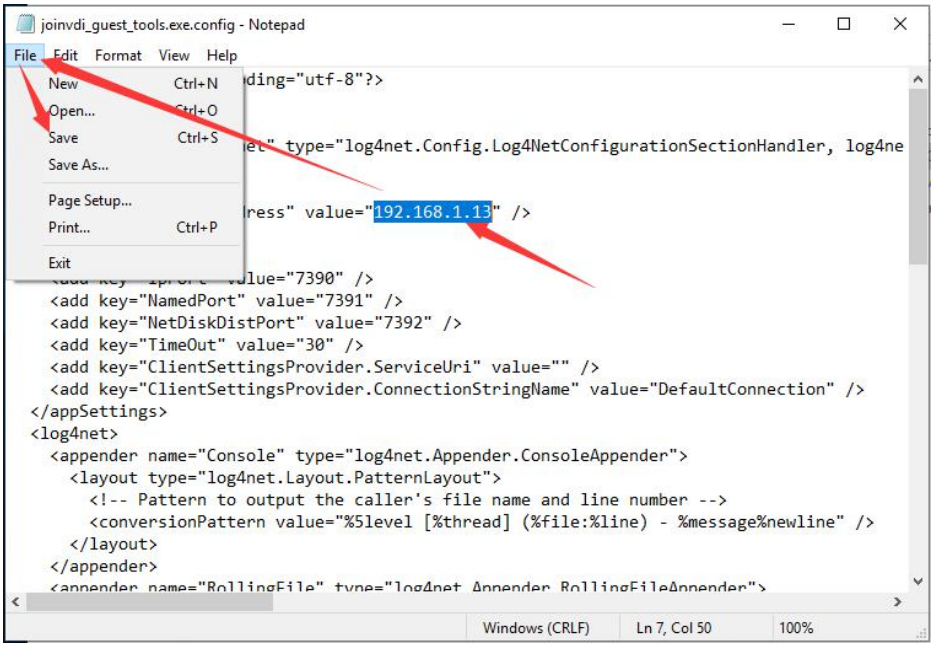
5) Open the **joinvdi_guest_tools.exe.config** file by Notepad.





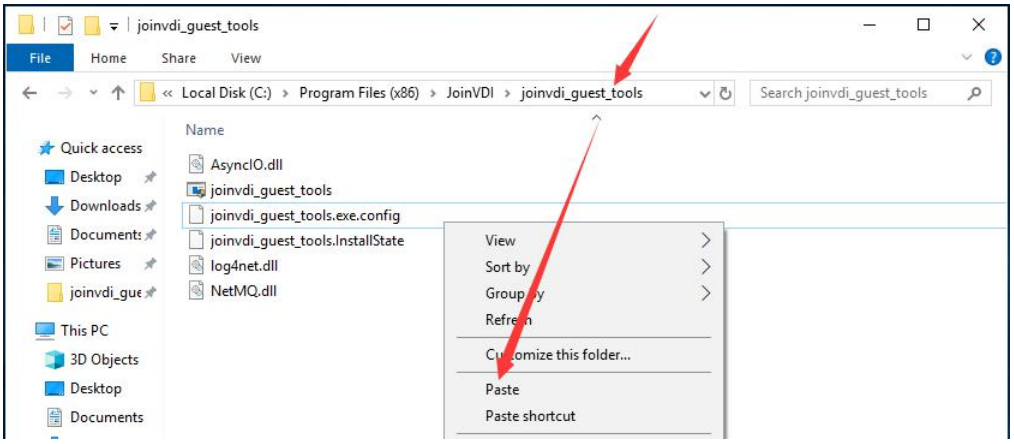


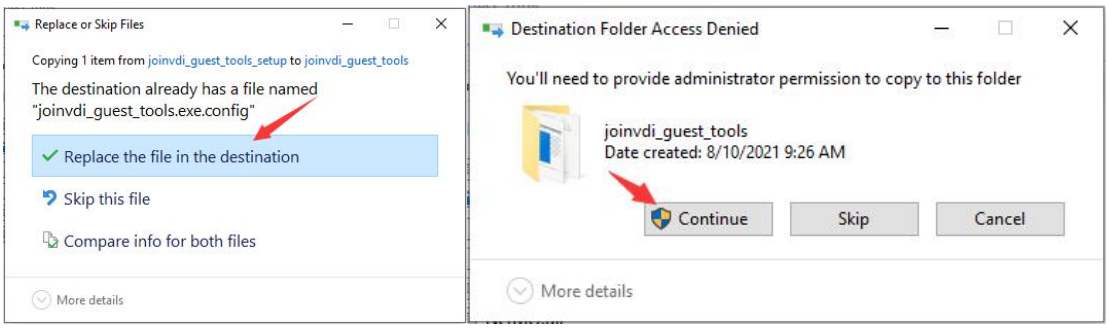
6) Modify the value of the IP address in the text to the IP address of the server → **Save**.



7) Copy the modified file **joinvdi_guest_tools.exe.config** to **C:\Program Files (x86)\JoinVDI\joinvdi_guest_tools** → select **Replace the file in the destination** → **Continue**.

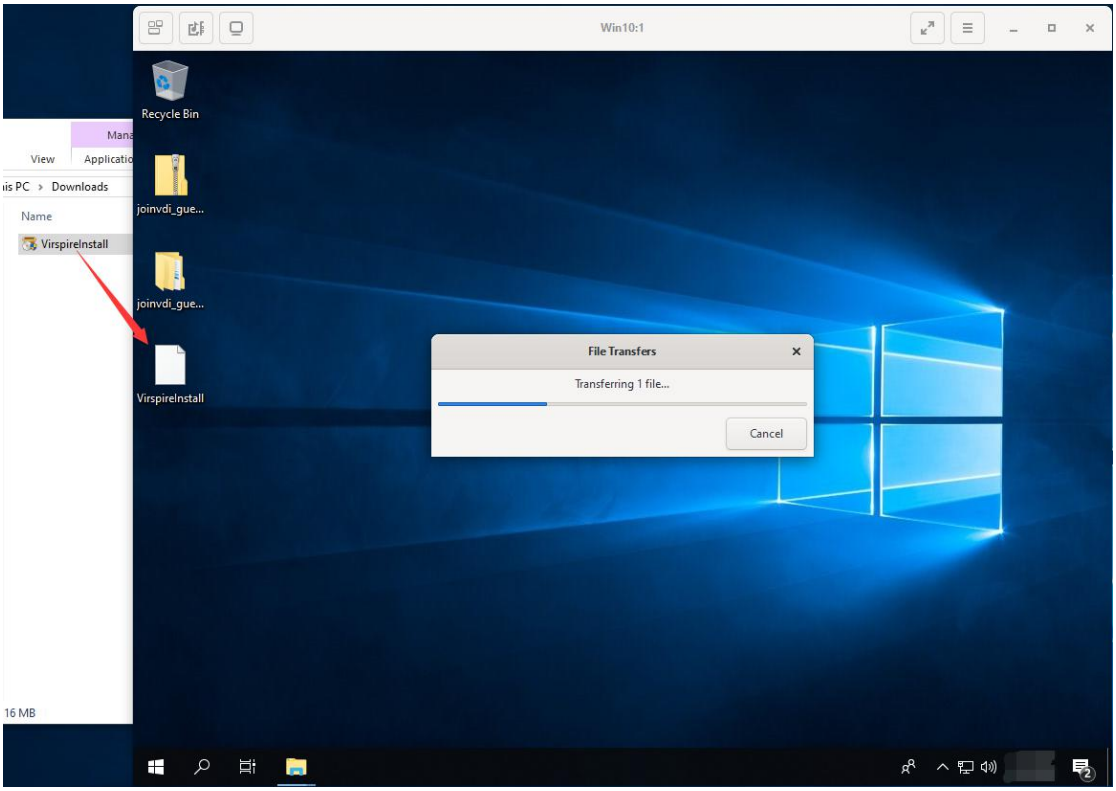
- For 32-bit systems, please copy to **C:\Program Files\JoinVDI\joinvdi_guest_tools**



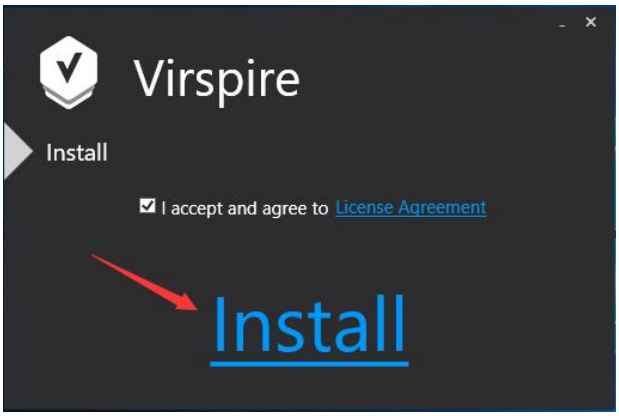


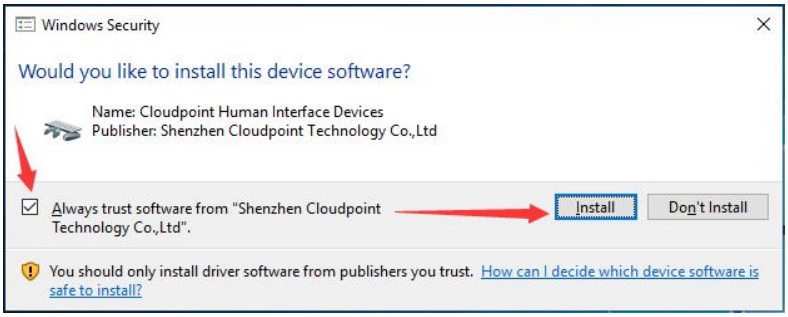
5.1.6 Install Virspire Desktop Agent

1) Drag the installation package **VirspireInstall.exe** into console.



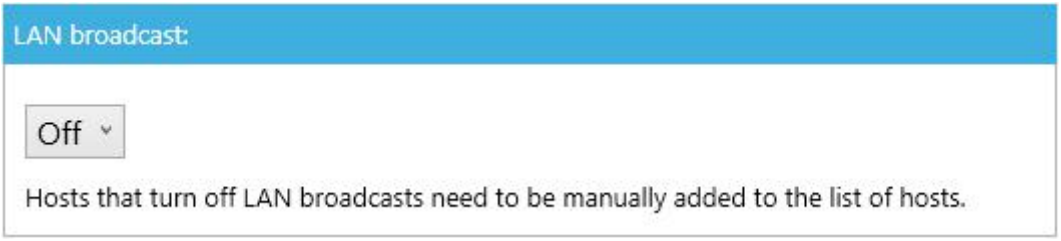
2) Run the **VirspireInstall.exe** and click **Install**. Click **Install** when prompt **Windows Security** during installation. After the installation is complete, click **Install Completed** to enter the configuration wizard of Virspire.



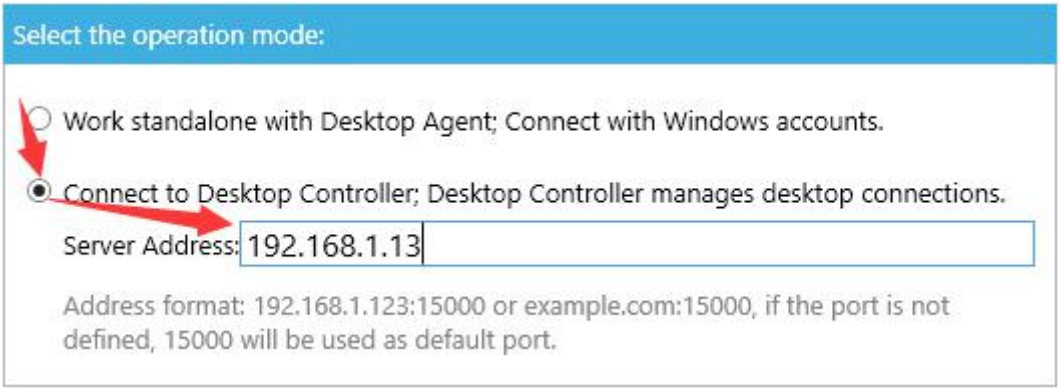


3) Keep the default **13389** in **Connection Port**, click **Next**.

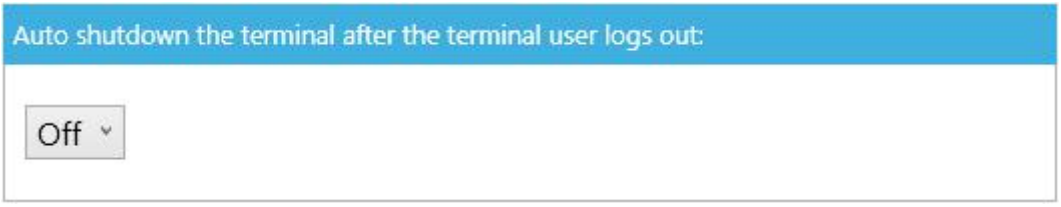
4) Keep the default **Off** in **LAN broadcast**, click **Next**.



5) Select the operation mode as **Connect to Desktop Controller; Desktop Controller manages desktop connections**, and enter the **Server Address**, e.g. 192.168.1.13, and click **Next**



6) Keep the default **Off** in **Auto shutdown the terminal after the terminal user logs out**. Click **Next**

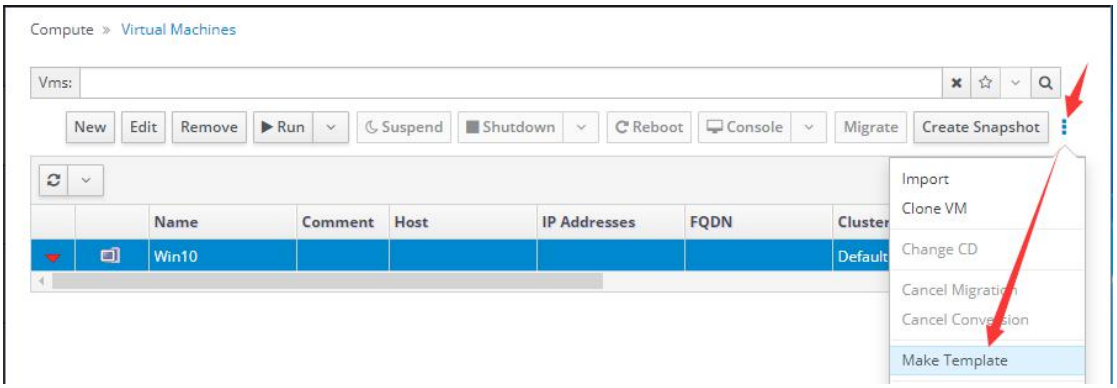


7) Reboot the virtual machine as prompted, and then shut down the virtual machine.

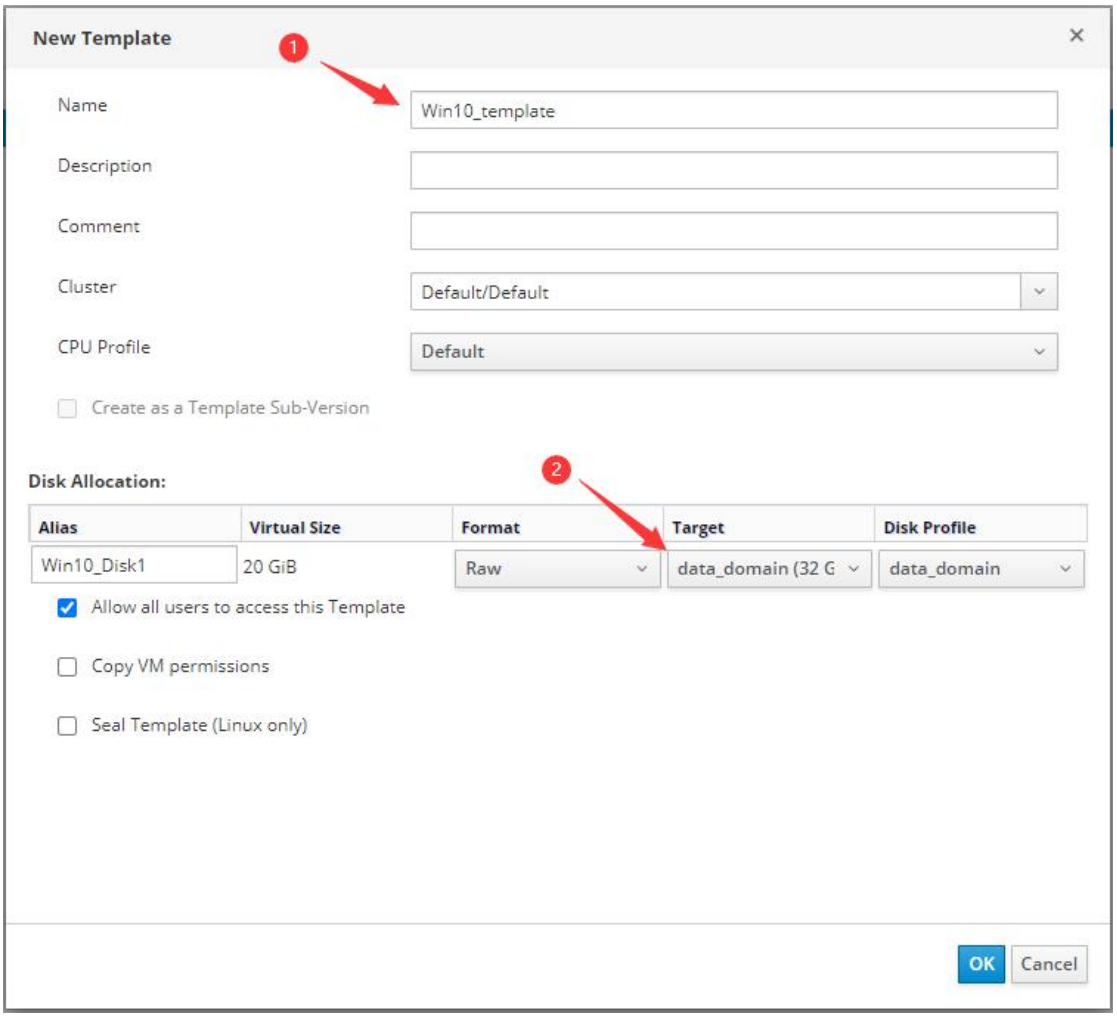
8) The installation of the new virtual machine is complete.

5.2 Creat a template

1) Ensure the virtual machine is powered down and select it, click **More Actions (⋮)** , then click **Make Template**

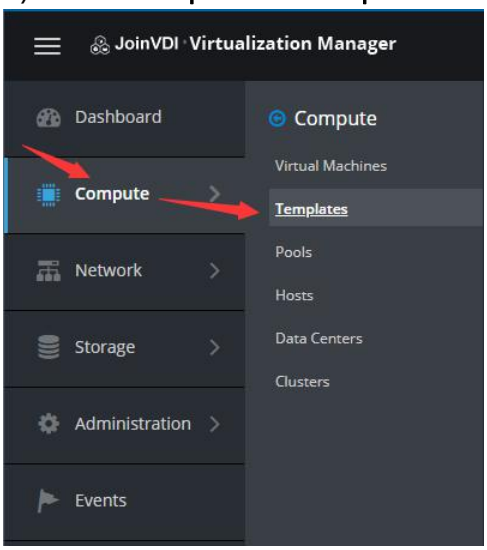


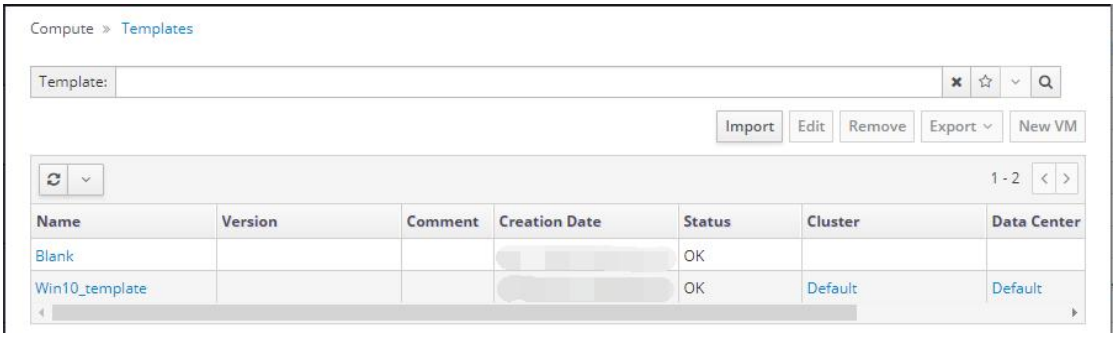
2) Enter a **Name** for the template, e.g. **Win10_template**, select the storage domain on which to store the disk from the Target drop-down. By default, these are the same as those of the source virtual machine. Click **OK**.



3) The virtual machine displays a status of **Image Locked** while the template is being created. When complete, the virtual machine status will return to Down after completion.

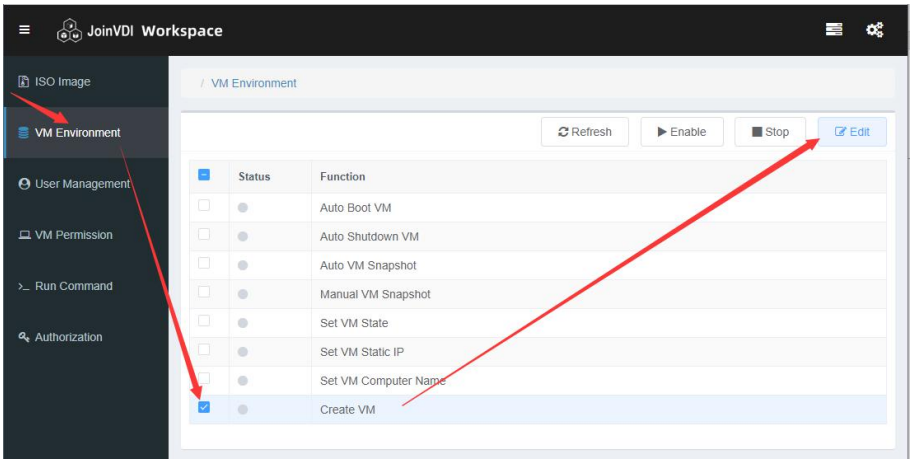
4) Click **Compute** → **Template** to check the created template.



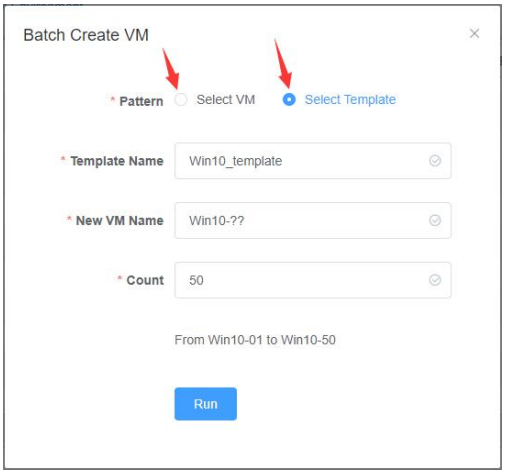


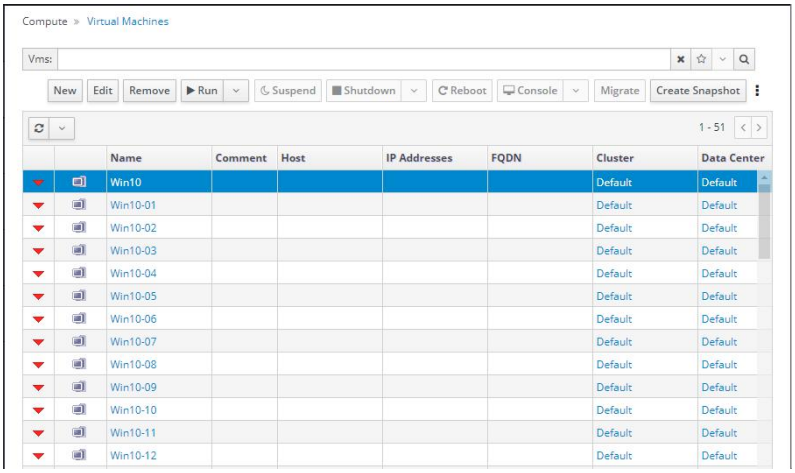
5.3 Batch create virtual machines

1) Navigate to **https://[Host IP]:8080** in Chrome browser, e.g. **https://192.168.1.13:8080**. Click **VM Entertainment**, check **Create VM** and click **Edit**



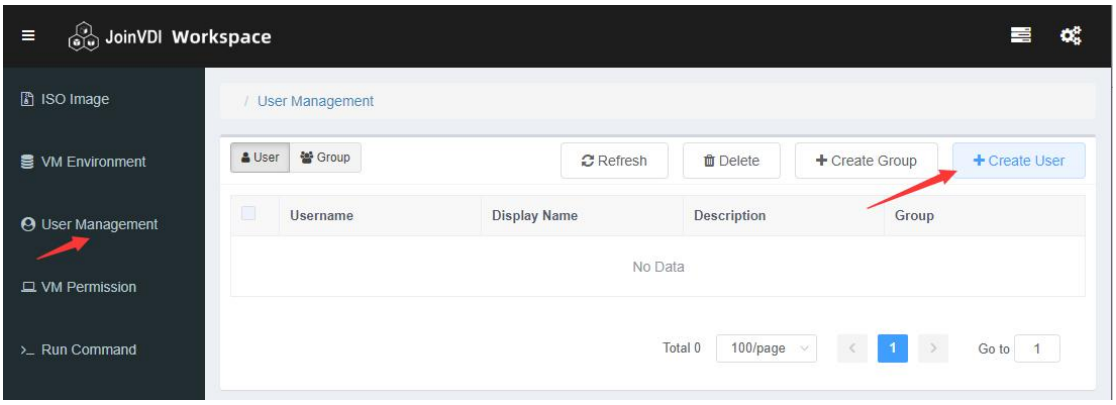
2) Check **Select VM** or **Select Template** to create virtual machines.
The entered **VM Name** or **Template Name** must be completely correct.
You can customize the numbering of the **New VM Name** with **??** as a placeholder. e.g. **Win10-??**, **Win10-??-test**.



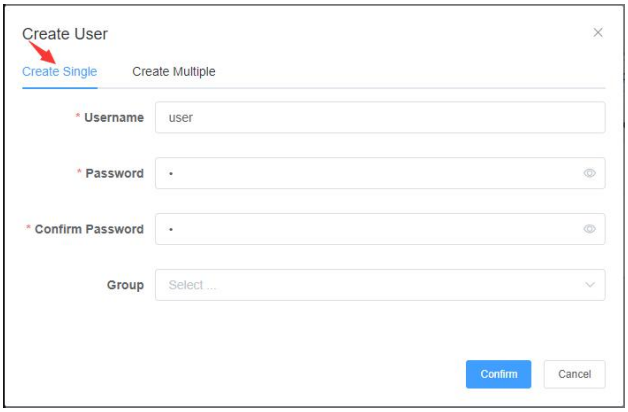


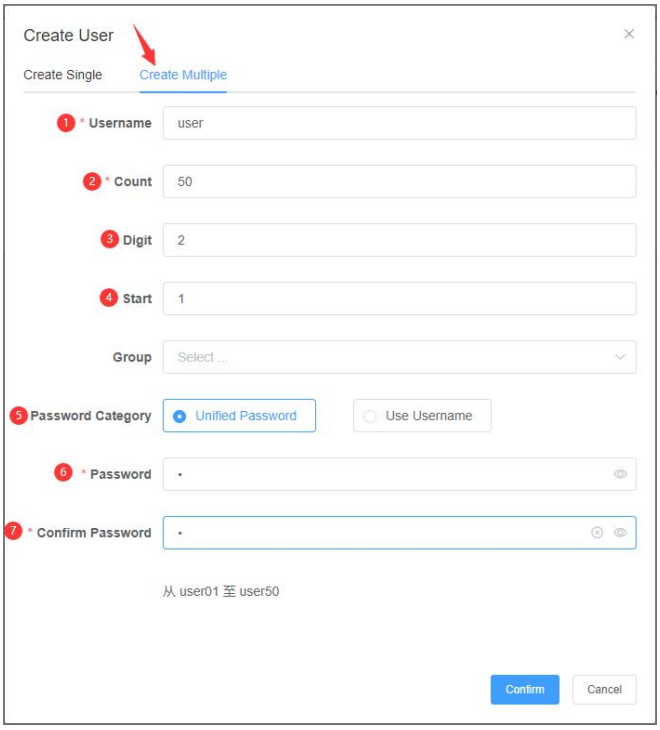
5.4 Create users

1) Navigate to **https://[Host IP]:8080** in Chrome browser. Click **User Management**, click **Create User**



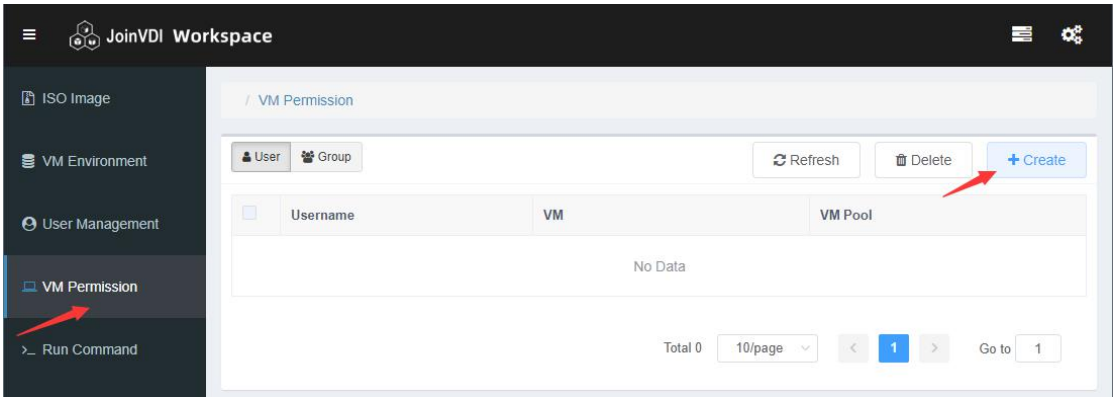
2) Chose **Create Single** or **Create Multiple** to create users, there are no password strength requirement.

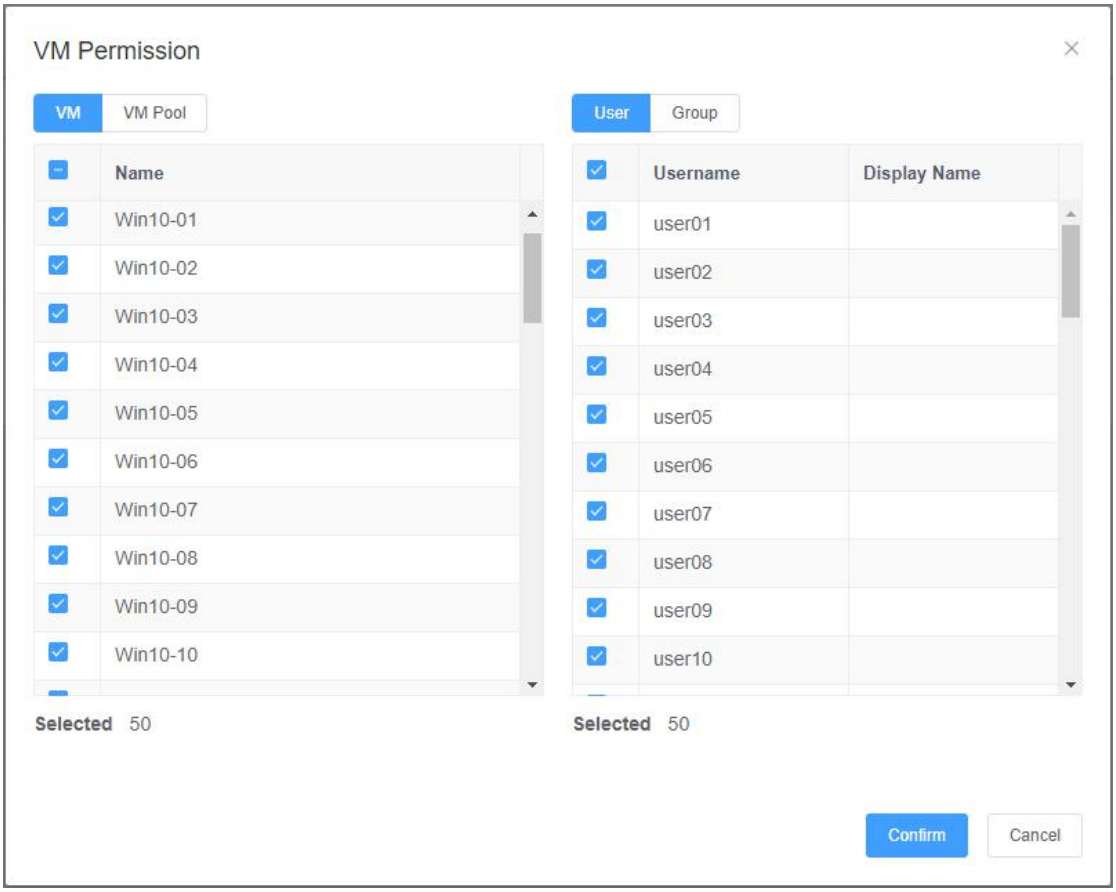




5.5 Assign virtual machines to users

1) Click **VM Permission**, click **+Create**, bind users and virtual machines





5.6 Connect the zero client to virtual machine

1) Power on the zero client, you can set **Language**, **Resolution**, **Network** at the top of the login interface.
2) After the network is connected, the **Connection Broker** will automatic searched in the host list.
3) Chose the **Connection Broker**, enter the user name and password, login to get the virtual machines.
4) Chose a virtual machine, click **login** to boot the virtual machine and display the screen.

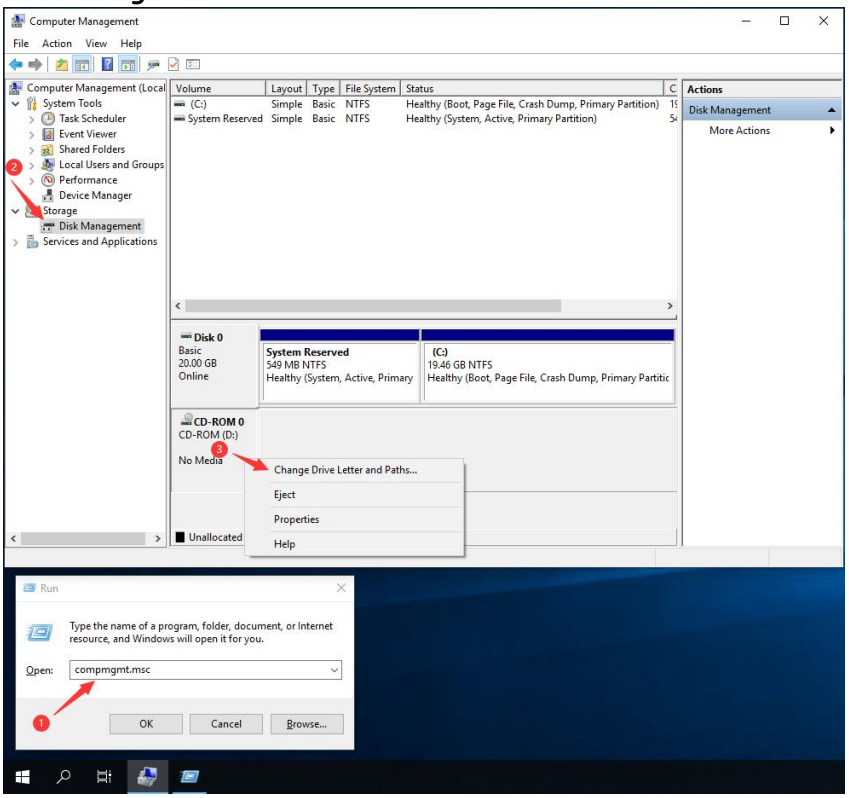
- If the **Connection Broker** not automatic searched in the host list. Please manually add the server IP.
- Confirm that the terminal is updated to the latest firmware, you can contact the solution provider for details.
- It's not recommended access the virtual machine by console 

after the zero client, login the virtual machine, so as to avoid the service exception caused by the resolution conflict.

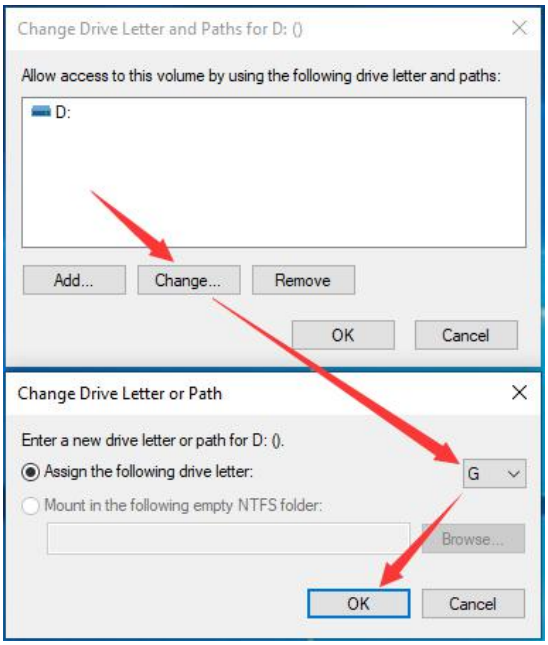
6. Appendixes:

6.1 Change Drive Letter of Windows Virtual Machine

1) Press **Win+R** in virtual machine, enter **compmgmt.msc**, then **Enter** to open **Computer Management**. Click **Disk Management**. Right-click **CD-ROM** → **Change Drive Letter and Paths...**



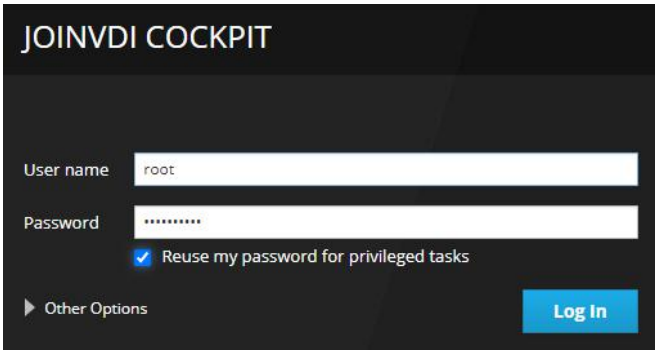
2) Change Drive Letter D to others. E.g., Drive Letter G.



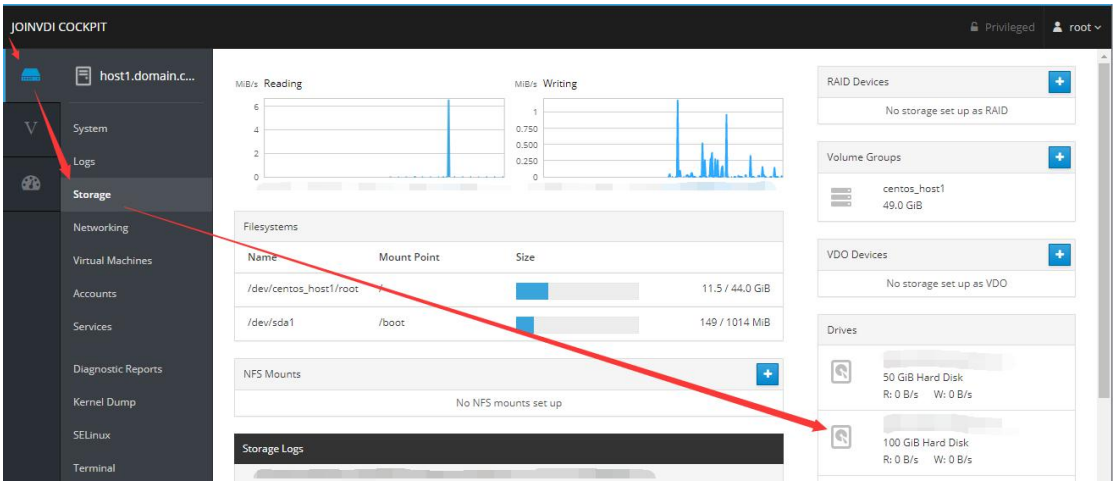
6.2 Add a hard disk to server

6.2.1 Mount a hard disk to the system

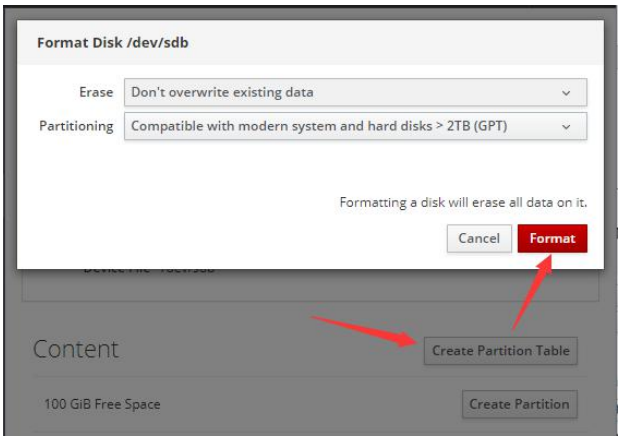
1) Navigate to **https://[Host IP]:9090**, e.g. https://192.168.1.13:9090, enter **root** in **User name**, enter root password in **Password**, and click **Log In**.



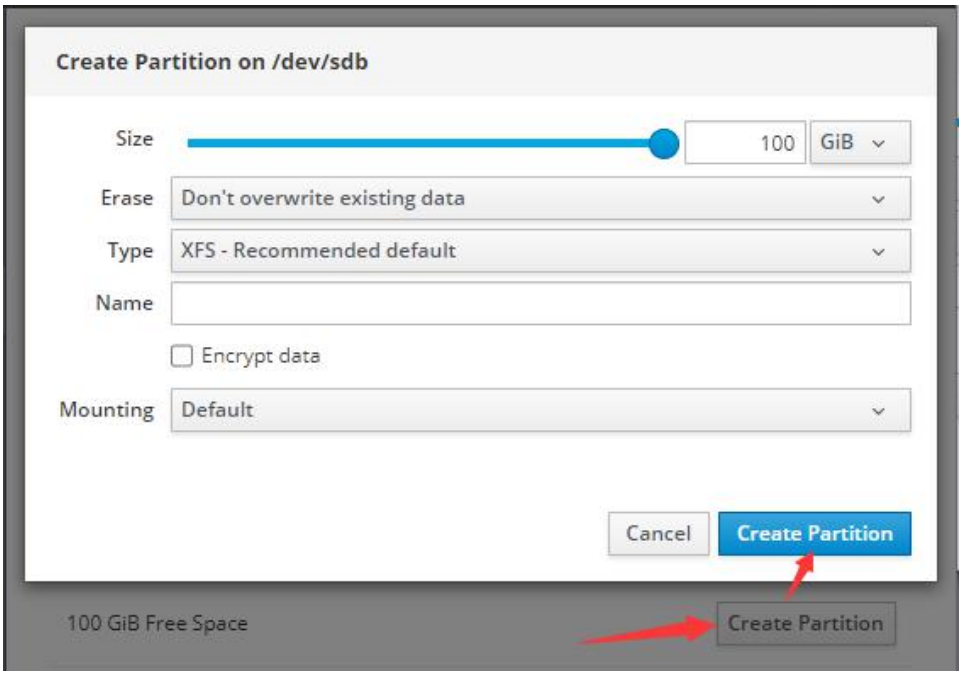
2) Click **localhost** → **Storage**, select the new hard disk.



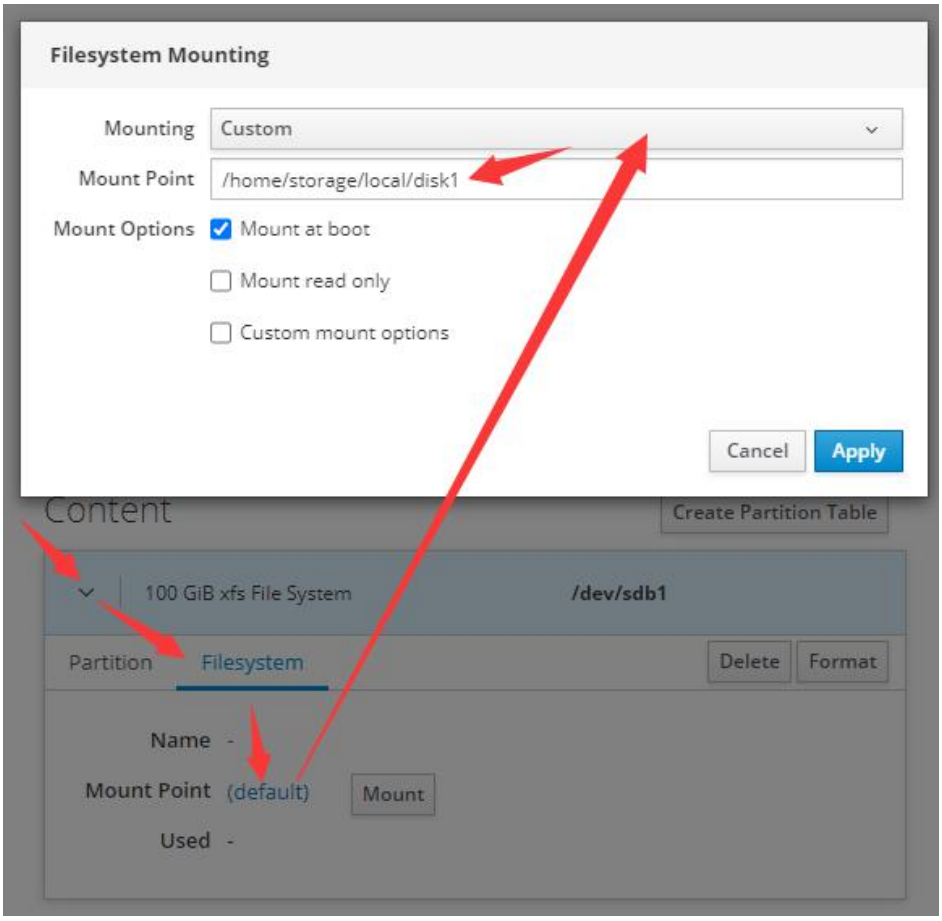
3) Click **Create Partition Table**. In the pop-up window, keep the default option and click **Format**.



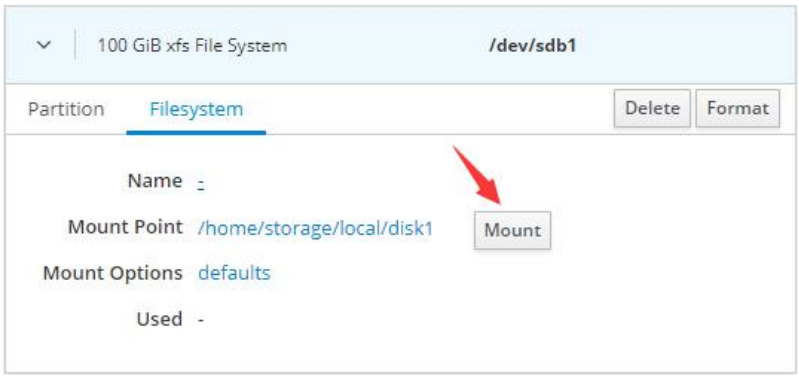
4) Click **Create Partition.**



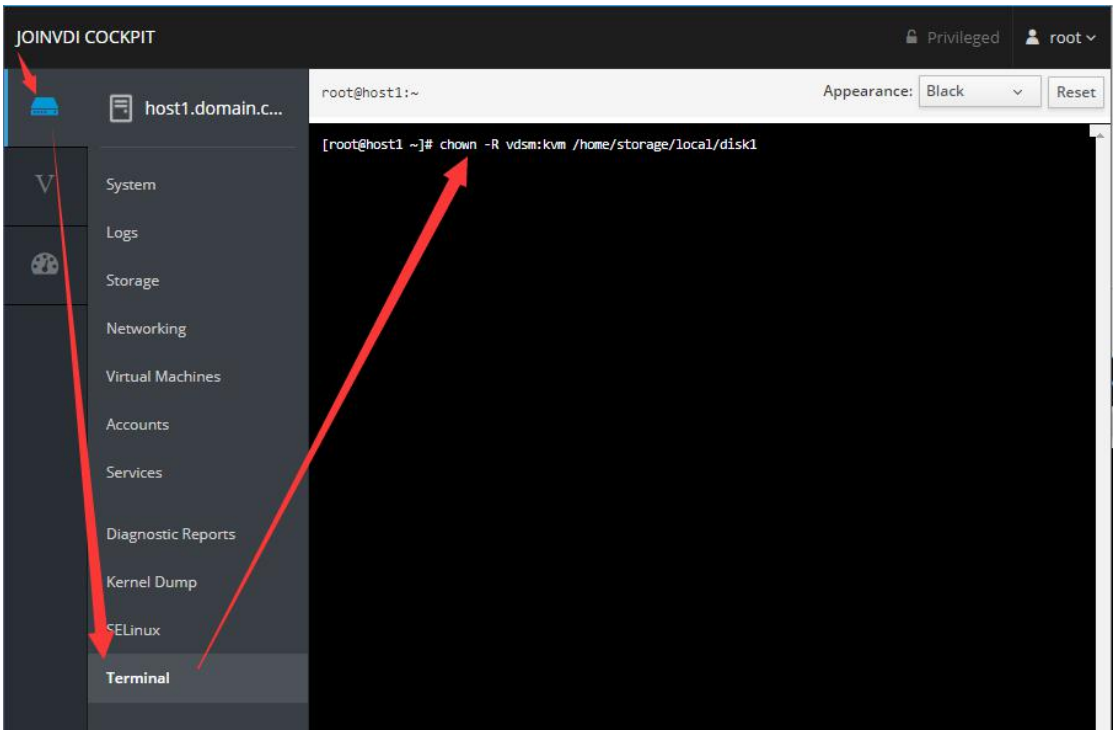
5) Unfold the content, chose **Filesystem**, click **(default)** to set **Mount Point** , select **custom** in Mounting, enter the path **/home/storage/local/disk1** in Mount Point, and click **Apply**.



6) Click **Mount**.



7) Click **terminal**, copy the command **chown -R vdsm:kvm /home/storage/local/disk1** and paste here, press **Enter** to change the path permission.



- Below are the default paths, can be used directly when adding a hard disk in the future.

/home/storage/local/disk2

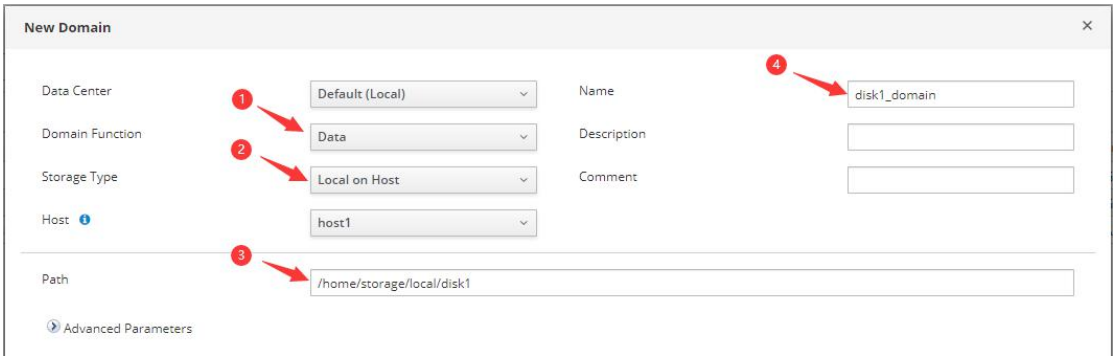
/home/storage/local/disk3

/home/storage/local/disk4

/home/storage/local/disk5

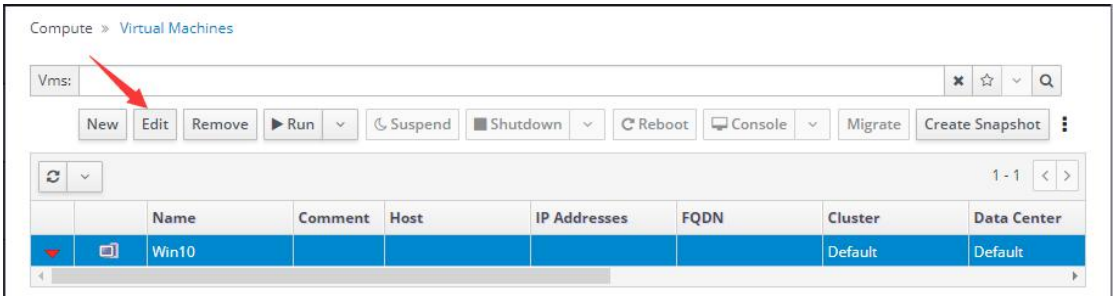
6.2.2 Add a hard disk to the storage domain

Navigate to **https://Host IP** , Click **Storage** → **Domains** → **New Domain** to add a new storage domain.

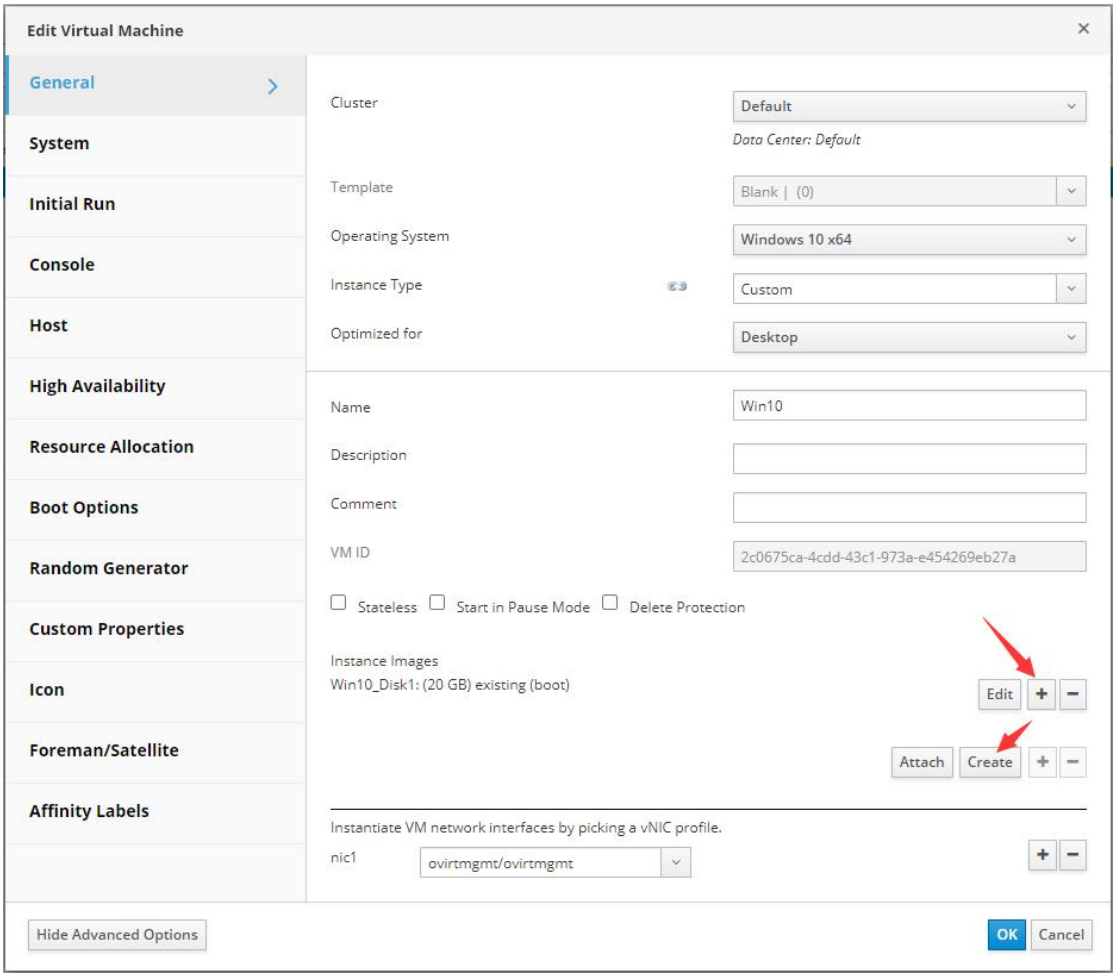


6.3 Add a new virtual disk to the virtual machine

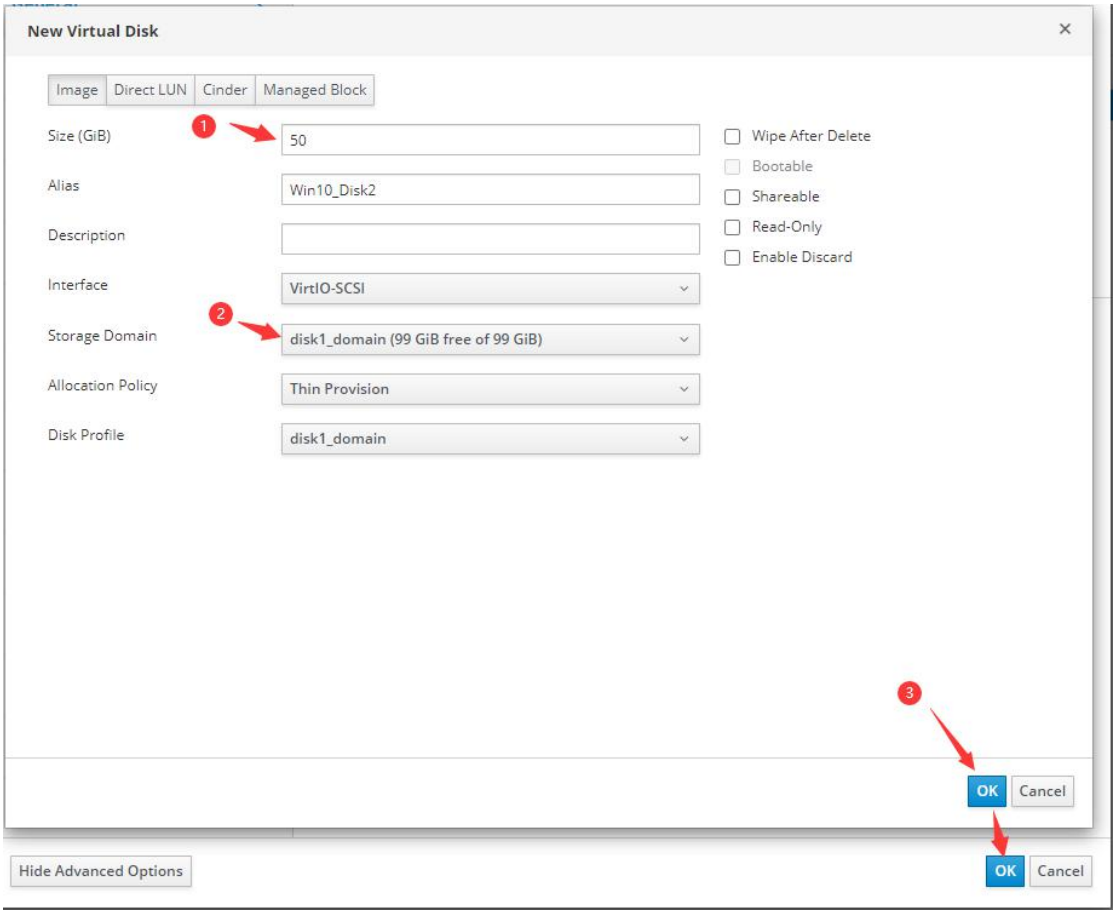
1) Select the virtual machine and click **Edit**.



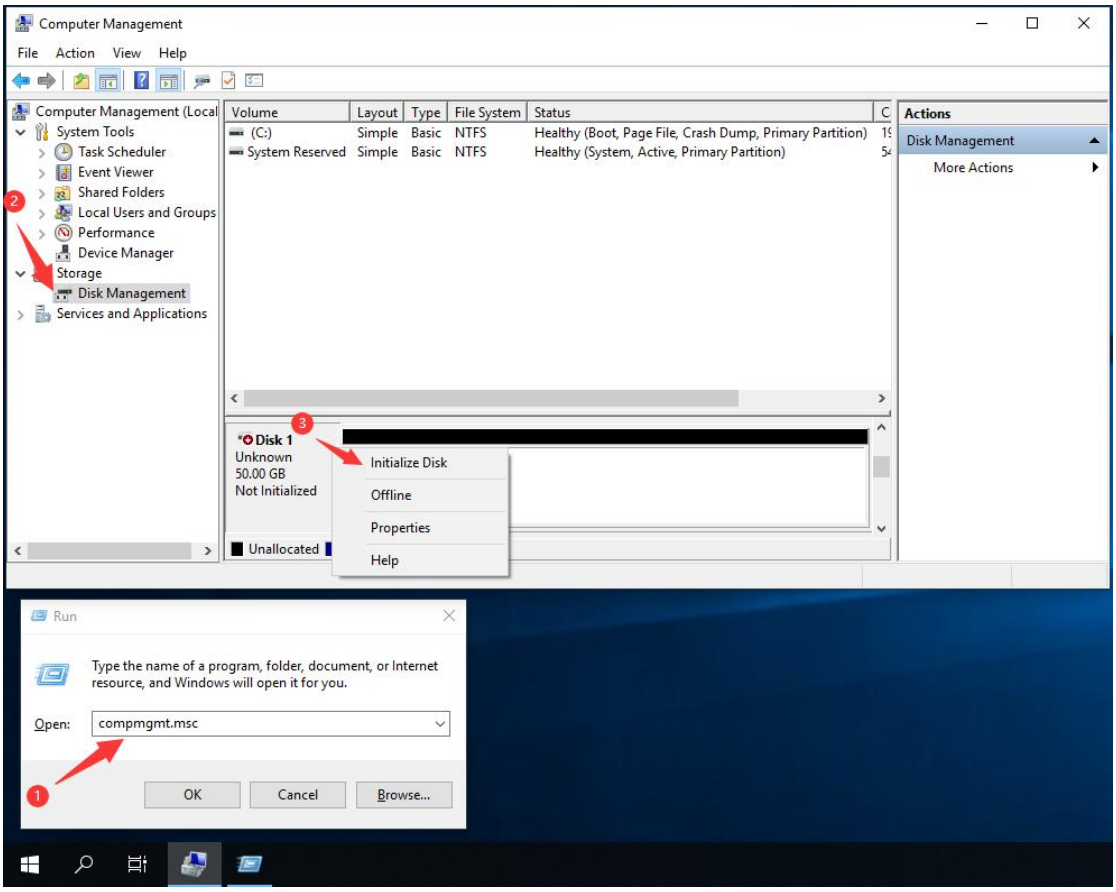
2) Click **+** → **Create** .



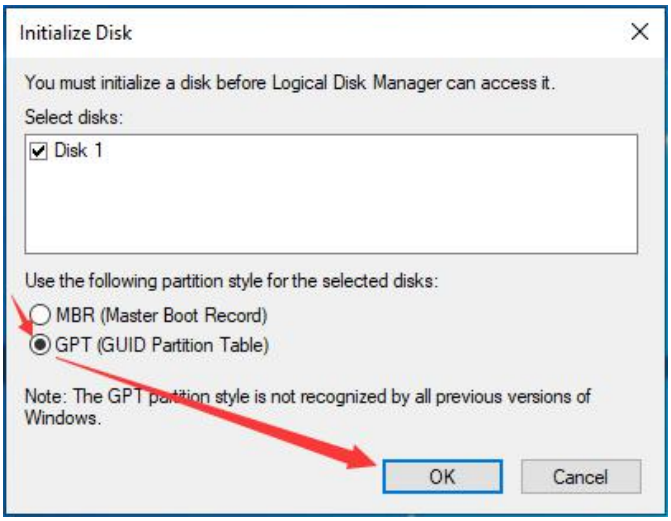
3) Enter the size of the virtual disk, select the target storage domain. And click **OK**.



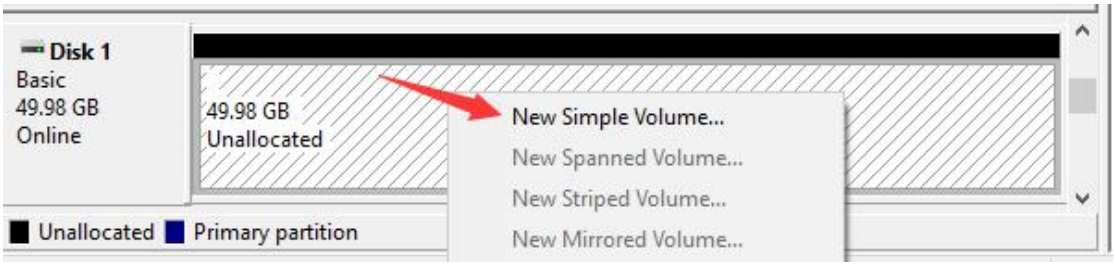
4) Press **Win+R** in virtual machine to open the Run dialog box, enter **compmgmt.msc**, press **Enter** to open **Computer Management**.
Click **Disk Management**. Right-click the new disk, and click **Initialize Disk**.



5) Chose **GPT** → **OK**.



6) Right-click, and then click **New Simple Volume**.



7) Click **Next** according to the wizard, and then finish to create a new simple volume.