Name - Aniket Kumar
Reg. no - 12108348
Roll no - B62

Q. No - 1

Q1. Make a documentation about the steps of installation process of cloudera in virtual machine.

⇒ There are several virtual machine managers (hypervisors) like vmware workstation, oracle VM virtualBox, GNOME Boxes, etc, which helps to use cloudera.

Here, I am going to install the cloudera in oracle VM VirtualBox.

Prerequisites:-
- Oracle VM VirtualBox installed in the system
- cloudera virtualbox image file (approx 5.5 GB)
- An archive manager such as 7zip to extract the cloudera image file.

Steps of Installation Process
- firstly, we need to extract the cloudera image file, which contains two files, one is of ovf format (open virtualization format), and the other is virtual disk image file.
- Now, open the virtualBox, Go to tools → Import.
- The import wizard will open, which will ask for the ovf file.
- click on browse files, then locate the extracted ovf file and open it.
- click on next button.

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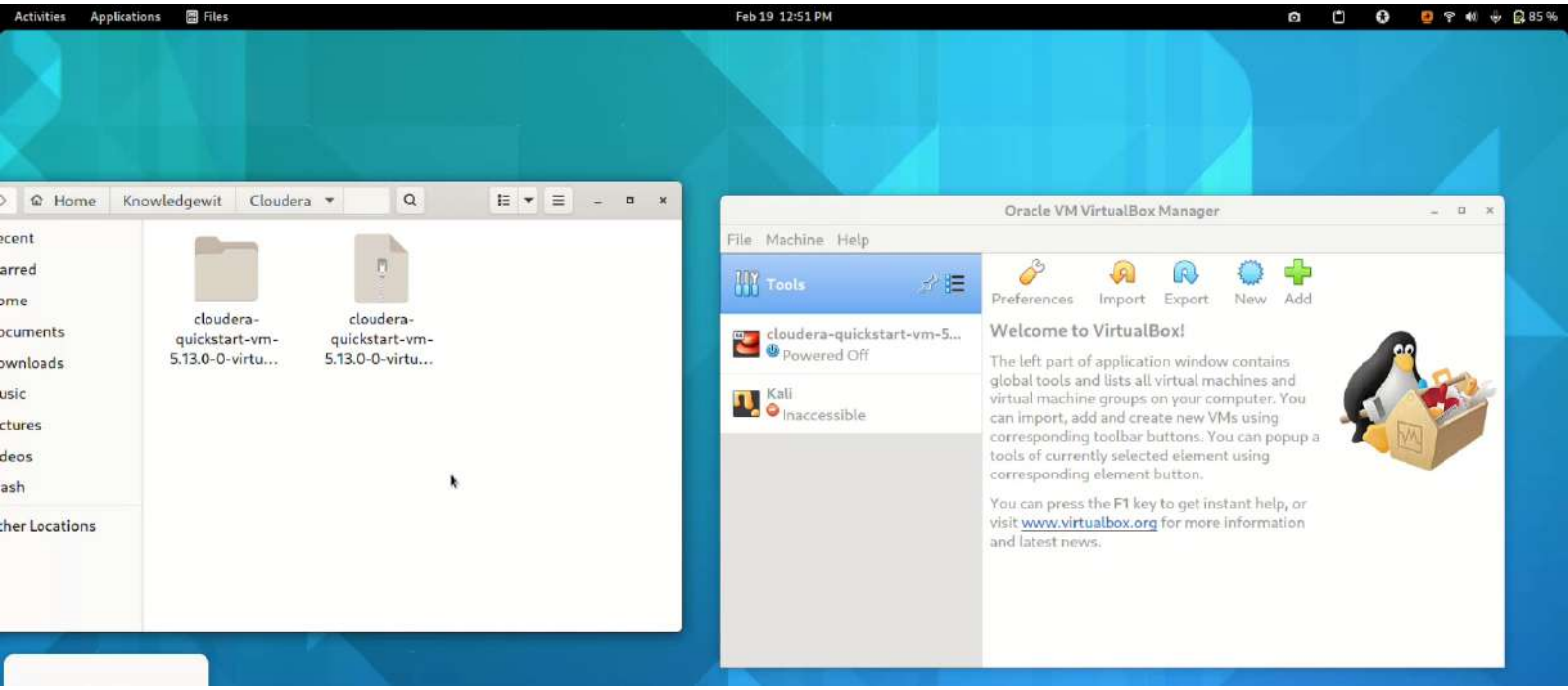
- Now, the hardware configuration will be shown.
- Keep the things as it is, which is recommended, and then click on import button.
- Now, the import process will start and will take about a couple of minutes to finish importing.
- After importing will finish, we can see it in the sidebar of the virtual box.
- click on the start button to launch the cloudera.
- It take some time to start the cloudera.
- After loading for some time (a few minutes), the cloudera will be finally opened.
- The homeScreen contains cloudera-express launcher, which is used for doing all the Practicals, as well as the terminal, which is used to run the Commands.
- The Installation of the cloudera in virtual box is Complete now.

These were the steps which are to be followed, in order to Install the cloudera in a virtual machine.


Activities
Applications
Files
Feb 19 12:51 PM
85 %
Home
Knowledgewit
Cloudera
cloudera-quickstart-vm-5.13.0-0-virtu...
cloudera-quickstart-vm-5.13.0-0-virtu...
Oracle VM VirtualBox Manager
File
Machine
Help
Tools
Preferences
Import
Export
New
Add
cloudera-quickstart-vm-5...
Powered Off
Kali
Inaccessible
Welcome to VirtualBox!
The left part of application window contains global tools and lists all virtual machines and virtual machine groups on your computer. You can import, add and create new VMs using corresponding toolbar buttons. You can popup a tools of currently selected element using corresponding element button.
You can press the F1 key to get instant help, or visit www.virtualbox.org for more information and latest news.

Import Virtual Appliance

Appliance to import

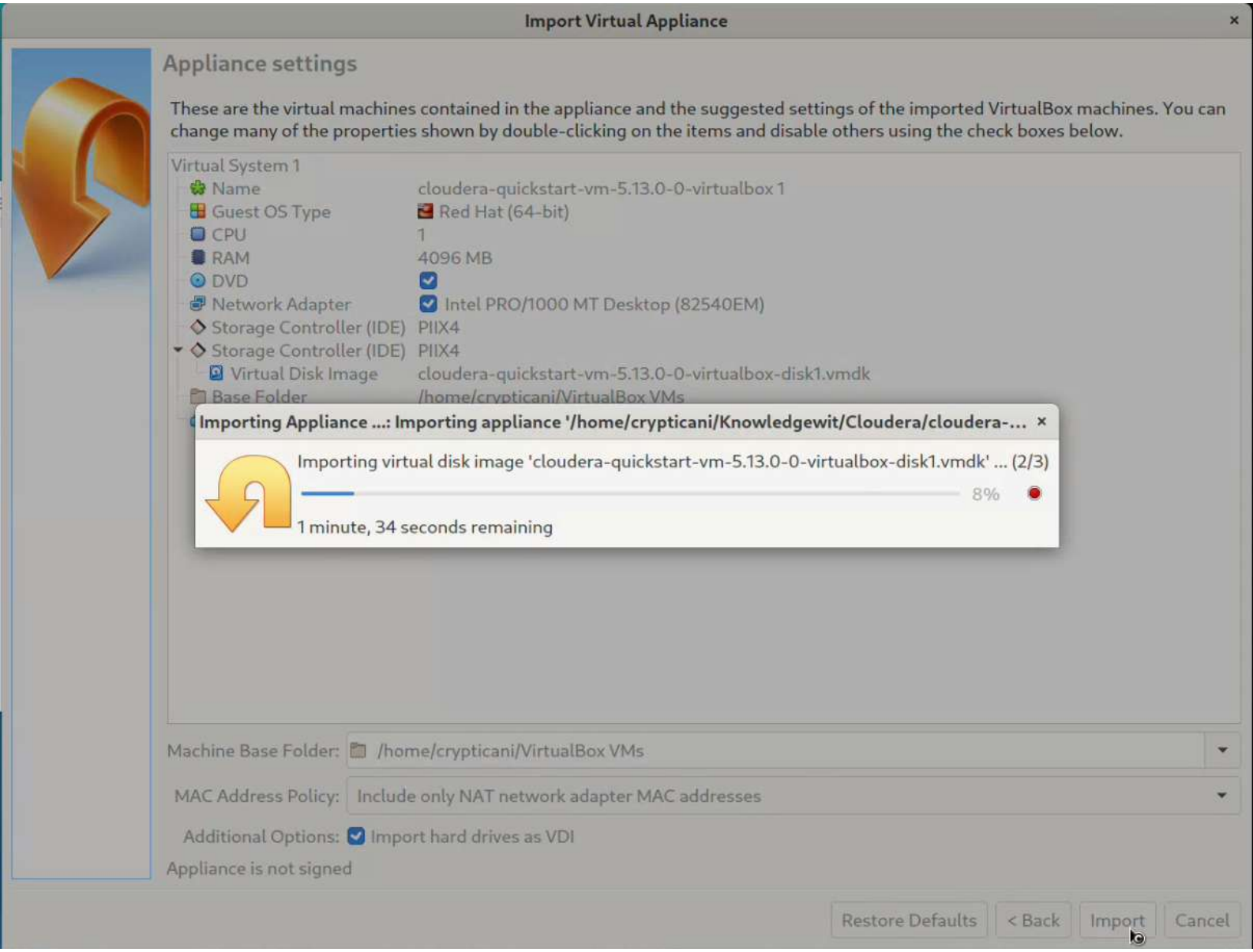
Please choose the source to import appliance from. This can be a local file system to import OVF archive or one of known cloud service providers to import cloud VM from.

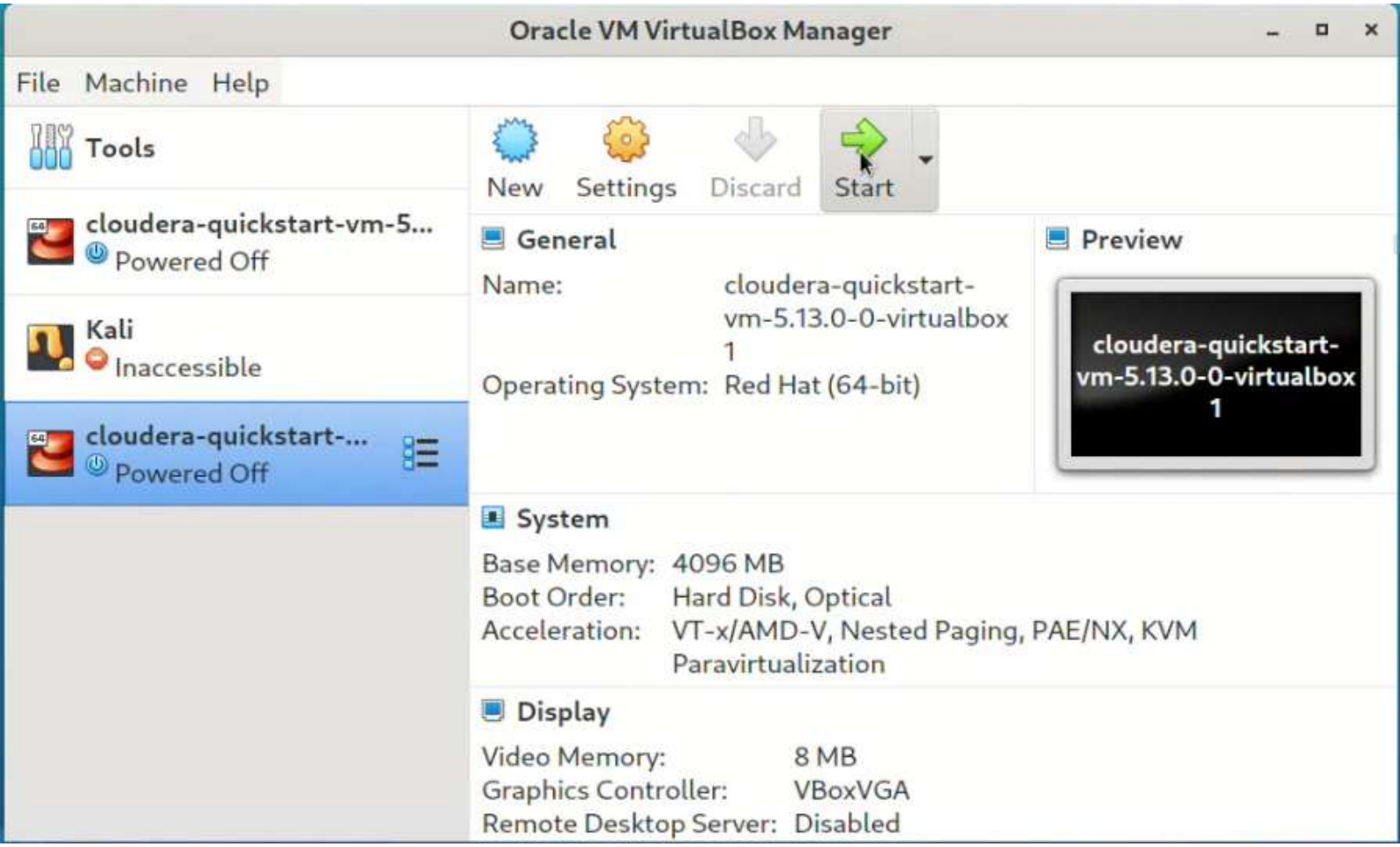
Source: Local File System

Please choose a file to import the virtual appliance from. VirtualBox currently supports importing appliances saved in the Open Virtualization Format (OVF). To continue, select the file to import below.

File: owledgewit/Cloudera/cloudera-quickstart-vm-5.13.0-0-virtualbox/cloudera-quickstart-vm-5.13.0-0-virtualbox.ovf

Expert Mode | < Back | Next > | Cancel


Import Virtual Appliance
Appliance settings
These are the virtual machines contained in the appliance and the suggested settings of the imported VirtualBox machines. You can change many of the properties shown by double-clicking on the items and disable others using the check boxes below.
Virtual System 1
Name
cloudera-quickstart-vm-5.13.0-0-virtualbox 1
Guest OS Type
Red Hat (64-bit)
CPU
1
RAM
4096 MB
DVD
Network Adapter
Intel PRO/1000 MT Desktop (82540EM)
Storage Controller (IDE)
PIIX4
Storage Controller (IDE)
PIIX4
Virtual Disk Image
cloudera-quickstart-vm-5.13.0-0-virtualbox-disk1.vmdk
Base Folder
/home/crypticani/VirtualBox VMs
Importing Appliance ...: Importing appliance '/home/crypticani/Knowledgewit/Cloudera/cloudera-...
Importing virtual disk image 'cloudera-quickstart-vm-5.13.0-0-virtualbox-disk1.vmdk' ... (2/3)
8%
1 minute, 34 seconds remaining
Machine Base Folder:
/home/crypticani/VirtualBox VMs
MAC Address Policy:
Include only NAT network adapter MAC addresses
Additional Options:
Import hard drives as VDI
Appliance is not signed
Restore Defaults
< Back
Import
Cancel


Oracle VM VirtualBox Manager
File Machine Help
Tools
cloudera-quickstart-vm-5...
Powered Off
Kali
Inaccessible
cloudera-quickstart-...
Powered Off
New
Settings
Discard
Start
General
Name: cloudera-quickstart-vm-5.13.0-0-virtualbox 1
Operating System: Red Hat (64-bit)
Preview
cloudera-quickstart-vm-5.13.0-0-virtualbox 1
System
Base Memory: 4096 MB
Boot Order: Hard Disk, Optical
Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX, KVM Paravirtualization
Display
Video Memory: 8 MB
Graphics Controller: VBoxVGA
Remote Desktop Server: Disabled


cloudera-quickstart-vm-5.13.0-0-virtualbox 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
You have the Auto capture keyboard option turned on. This will cause the Virtual Machine to automatically capture the keyboard every time the VM window is activated and make it unavailable to other applications running on your host machine:
The Virtual Machine reports that the guest OS supports mouse pointer integration. This means that you do not need to capture the mouse pointer to be able to use it in your guest OS -- all mouse actions you perform when the mouse pointer is over
Applications Places System
Fri Feb 18, 23:30 cloudera
Computer
Launch Cloudera Enterprise (trial)
cloudera's Home
Eclipse
Configure Kerberos
Migrate to Parcels
Trash
Launch Cloudera Express
cloudera
Right Ctrl

Q.2. Explain how we can share the files from host to virtual machine and vice-versa.

⇒ following are the steps to share files from host to virtual machine and vice-versa.

- fisstly, we have to enable this feature by downloading and installing virtualBox Guest Additions.
- To download and install virtualbox Guest Additions, Go to the menu Bar of the virtualbox and click on Devices.
- from Devices, go to Insert Guest Additions CD image....
- Now, if it is not downloaded yet, it will ask to download.
- click on download.
- It will look for the required files and ask again to Confirm the download.
- click on download button again.
- After downloading is finished, click on insert button to insert the CD.
- After inserting the CD, it will ask for AutoRun.
- Click on OK button.
- click on OK button again to Run the CD.
- It will ask for the Password of root account.
- Type- "cloudera" as the Password and Press Authenticate.
- Now, it will automatically open the terminal and ~~the~~ begin the Installation Process.

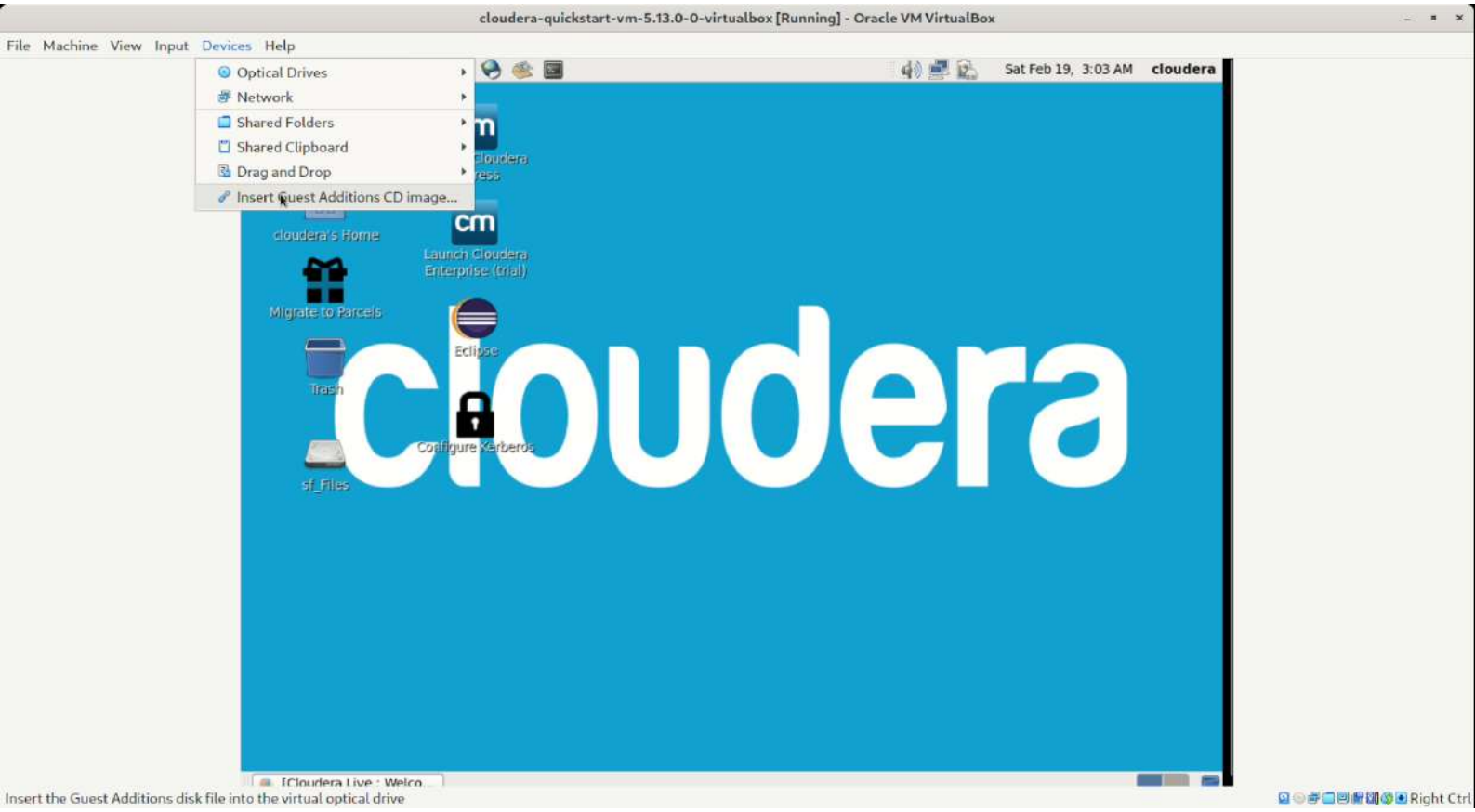
- Meanwhile, go to the Devices → Shared folders → Shared folder settings.
- Here, click on add folder icon, Choose the folder Path which we want to share, folder Name, make it auto mount, mount point to /mnt/share and make it Permanent.
- Click on OK to finish setting the shared folder.
- We can also set drag and drop and shared clipboard to bidirectional by going to the Devices → drag and drop and Devices → shared clipboard respectively.
- Now, the setup has been completed, just restart the virtual machine.

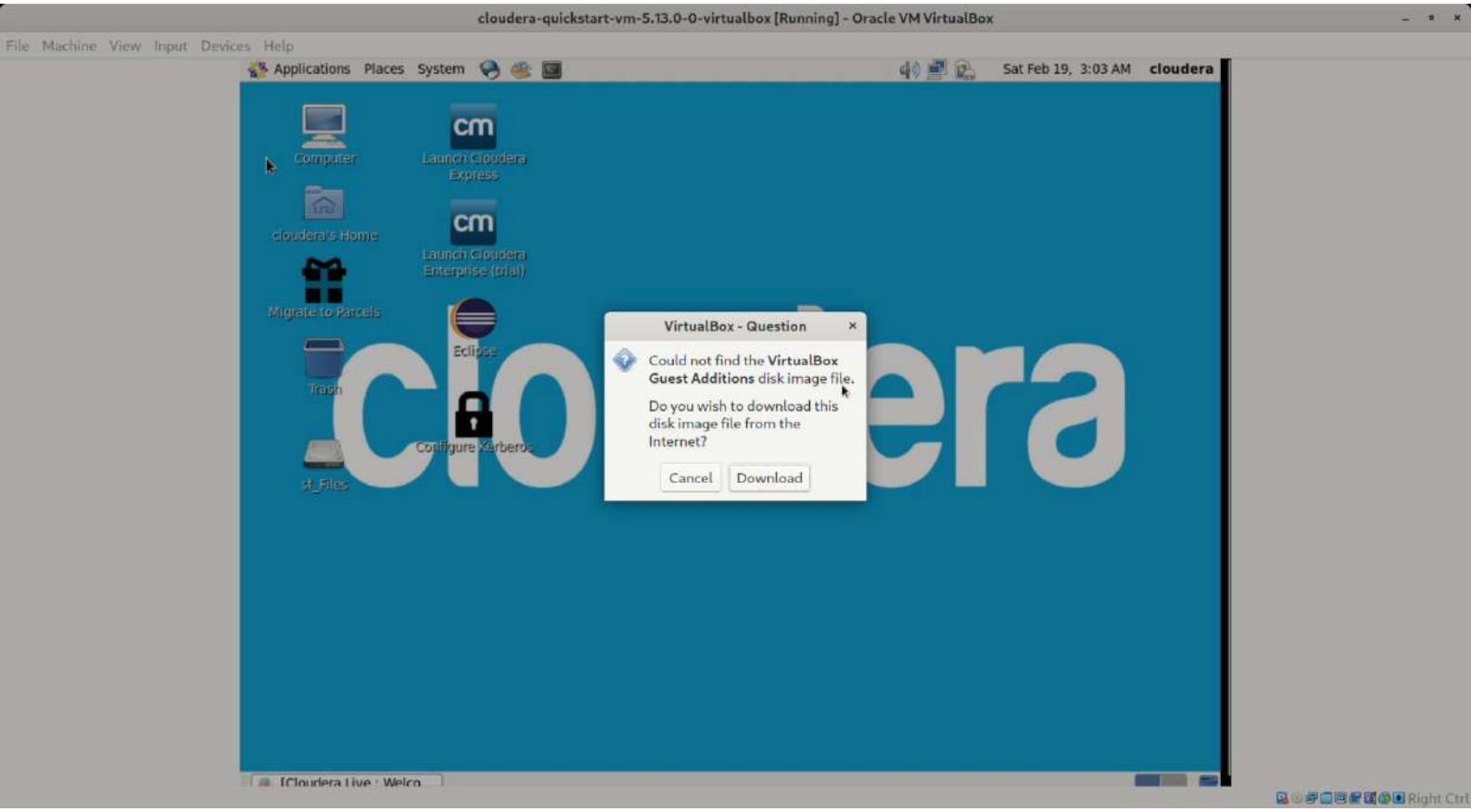
Now, to share the files, we have to do following steps:-

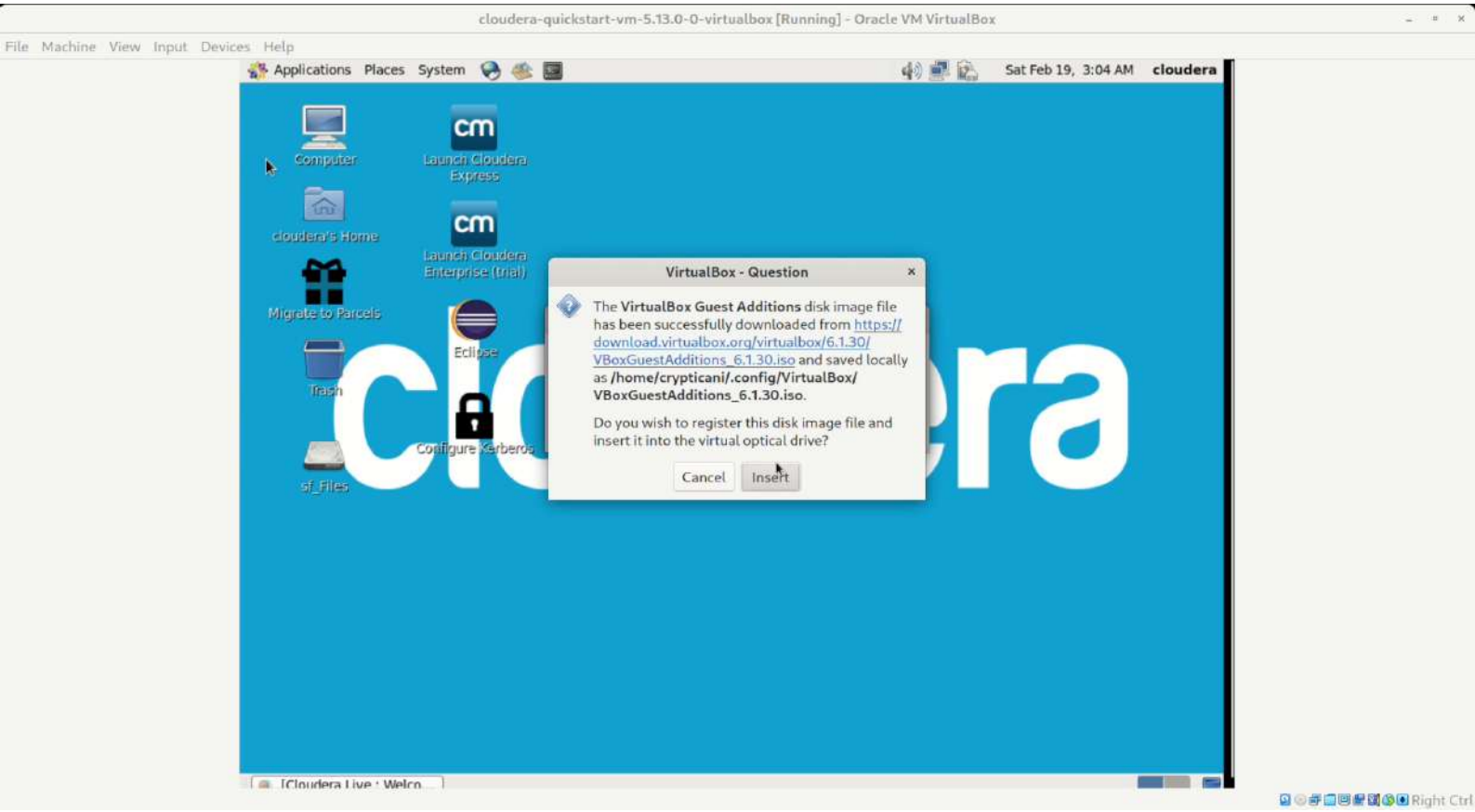
- Firstly, we need at least a file in the shared machine folder, which we have selected earlier.
- To open that file in the virtual machine, we have to go to /mnt/share and that folder will appear there.
- We can open already existing file as well as write new files in that folder, which can be viewed in the host machine too.
- In other words, the contents of the shared folder are accessible to both the host machine and virtual machine.

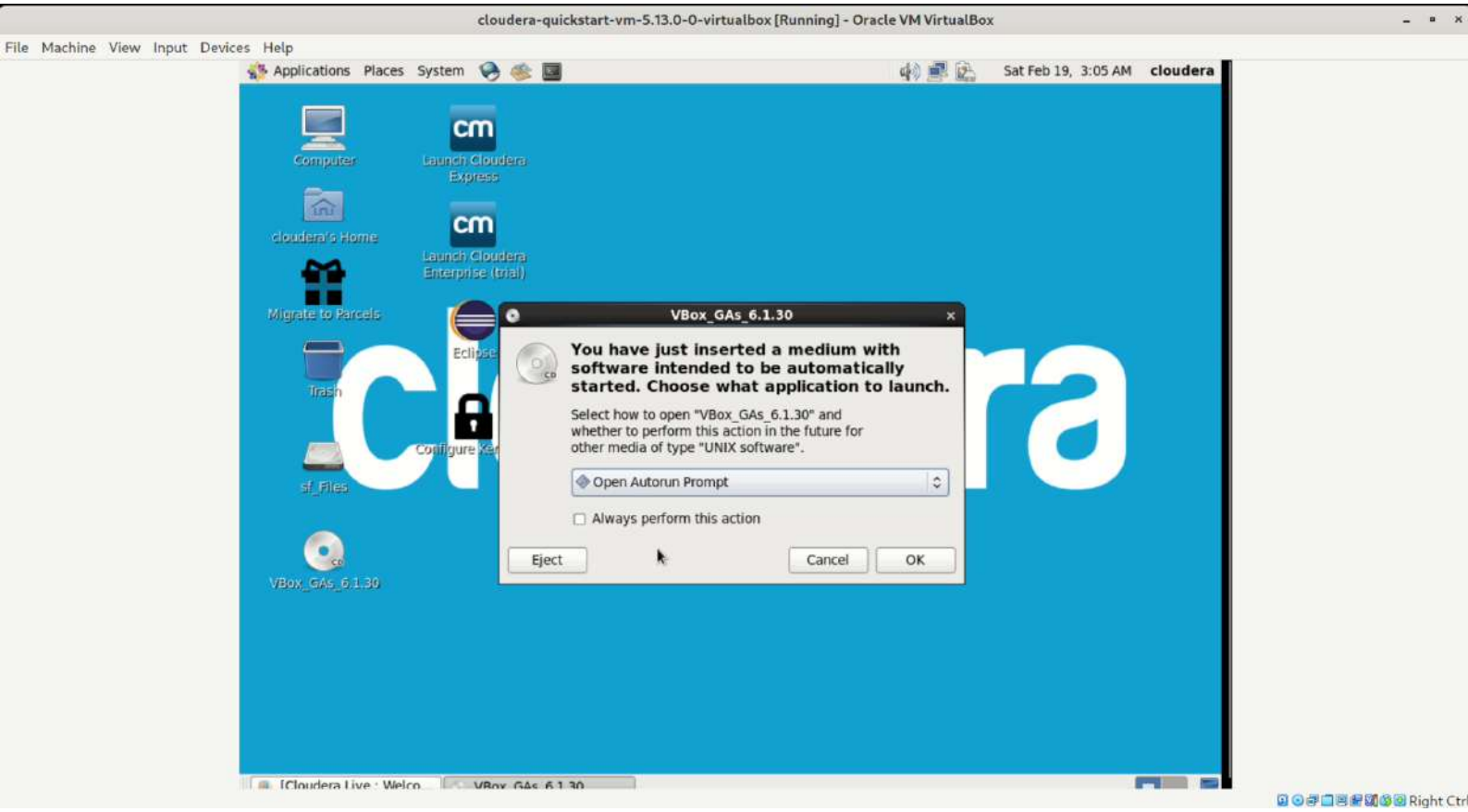
So, these were the steps to share files from host machine to virtual machine and vice-versa.

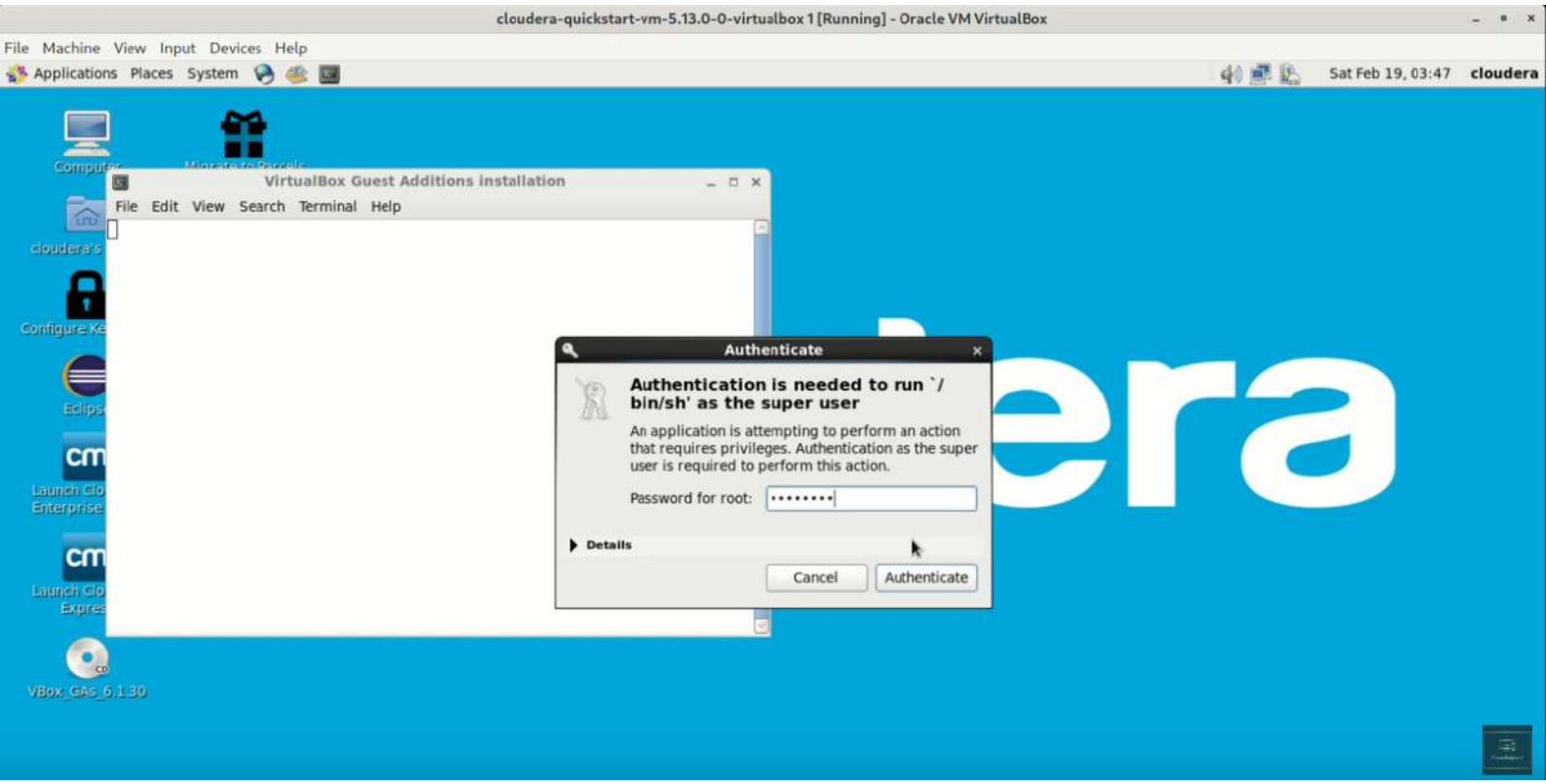
—

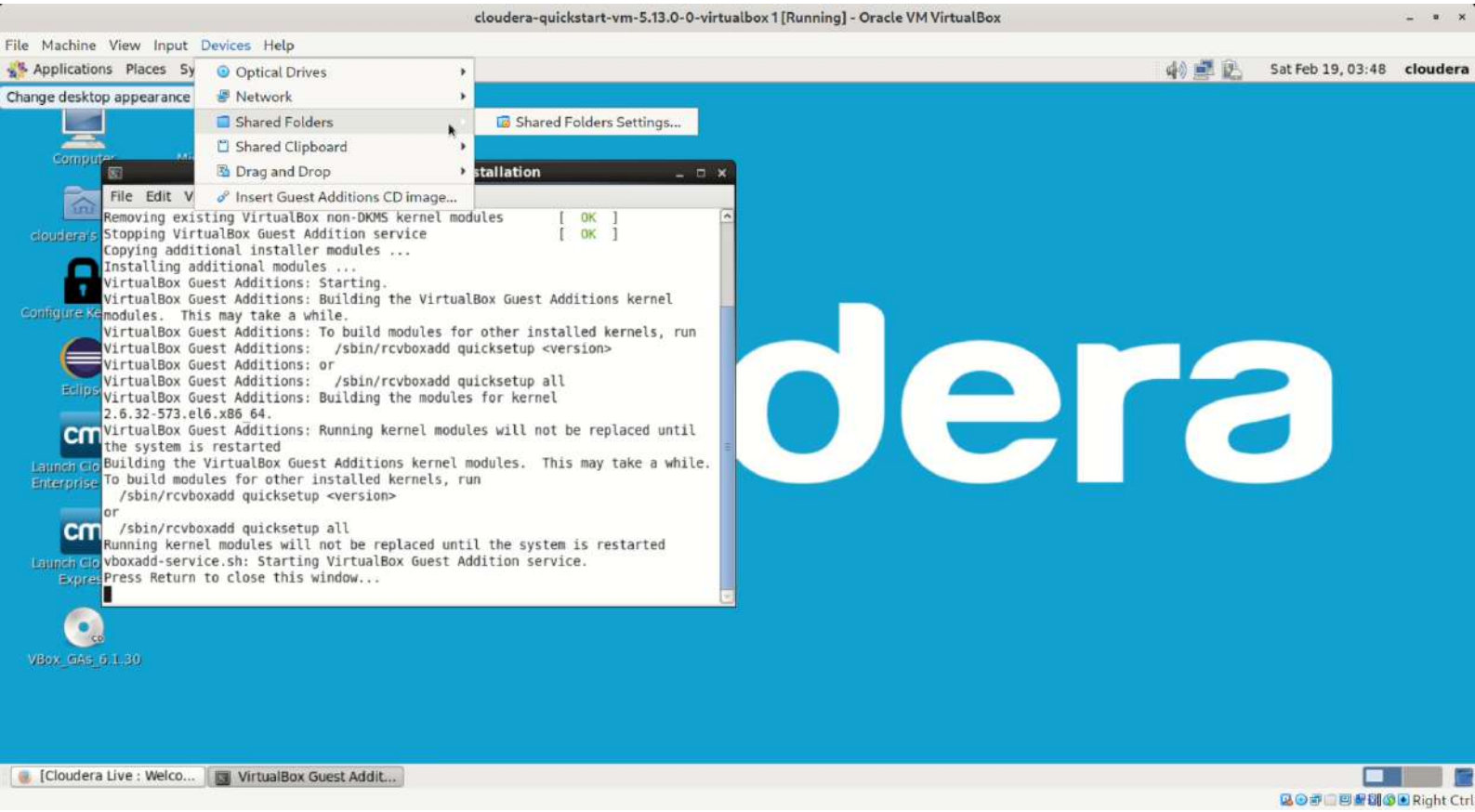

cloudera-quickstart-vm-5.13.0-0-virtualbox [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Optical Drives
Network
Shared Folders
Shared Clipboard
Drag and Drop
Insert Guest Additions CD image...
Sat Feb 19, 3:03 AM cloudera
cloudera's Home
Launch Cloudera Enterprise (trial)
Migrate to Parcels
Eclipse
Trash
Configure Kerberos
sf_Files
cloudera
Insert the Guest Additions disk file into the virtual optical drive
Right Ctrl

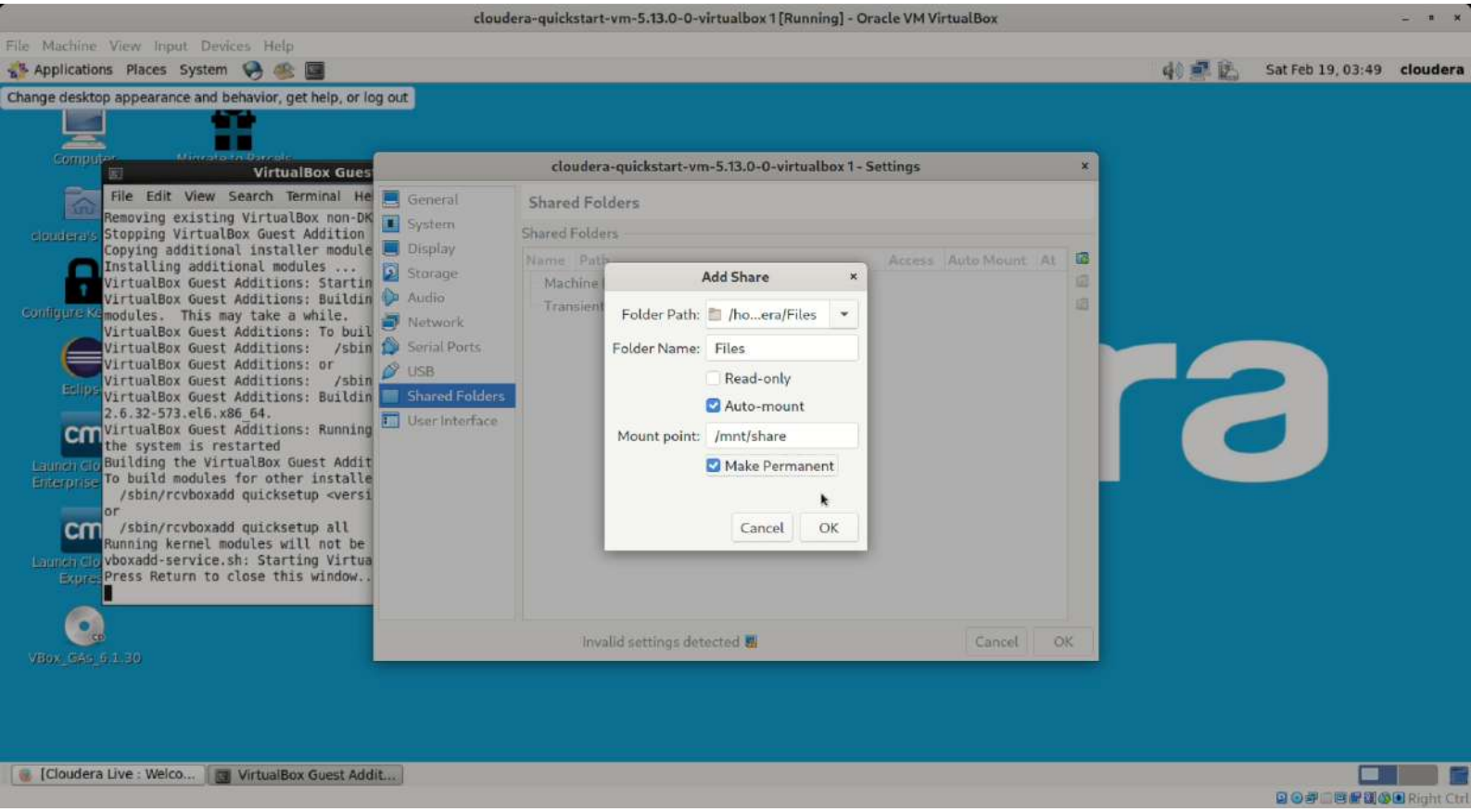

cloudera-quickstart-vm-5.13.0-0-virtualbox [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places System
Sat Feb 19, 3:03 AM cloudera
Computer
cloudera's Home
Migrate to Parcels
Trash
sf_Files
Launch Cloudera Express
Launch Cloudera Enterprise (trial)
Eclipse
Configure Kerberos
VirtualBox - Question
Could not find the VirtualBox Guest Additions disk image file.
Do you wish to download this disk image file from the Internet?
Cancel
Download
Right Ctrl

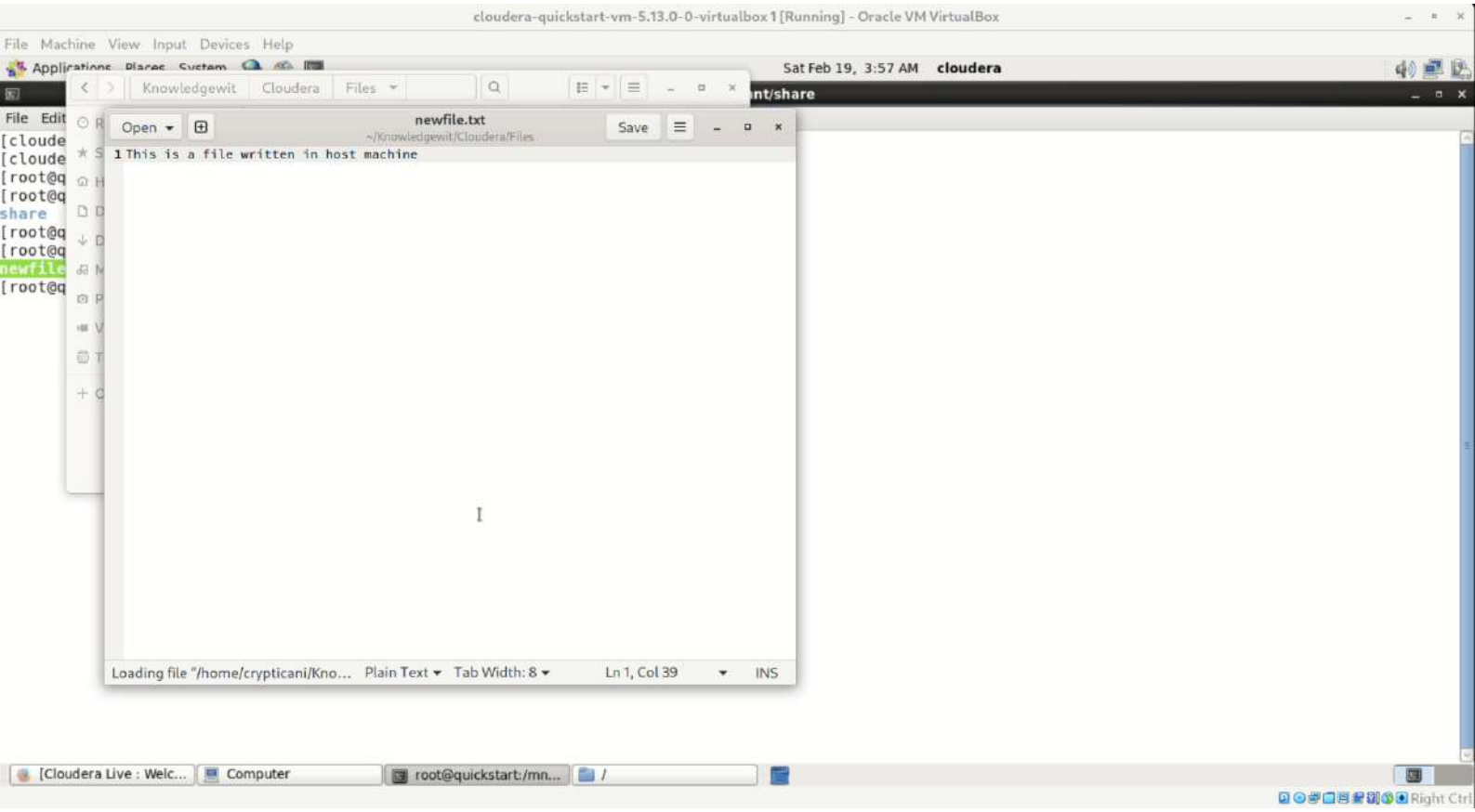

cloudera-quickstart-vm-5.13.0-0-virtualbox [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places System
Sat Feb 19, 3:04 AM cloudera
Computer
Launch Cloudera Express
cloudera's Home
Launch Cloudera Enterprise (trial)
Migrate to Parcels
Eclipse
Trash
Configure Kerberos
sf_Files
VirtualBox - Question
The VirtualBox Guest Additions disk image file has been successfully downloaded from https://download.virtualbox.org/virtualbox/6.1.30/VBoxGuestAdditions_6.1.30.iso and saved locally as /home/crypticani/.config/VirtualBox/VBoxGuestAdditions_6.1.30.iso.
Do you wish to register this disk image file and insert it into the virtual optical drive?
Cancel
Insert
[Cloudera Live : Welco...
Right Ctrl

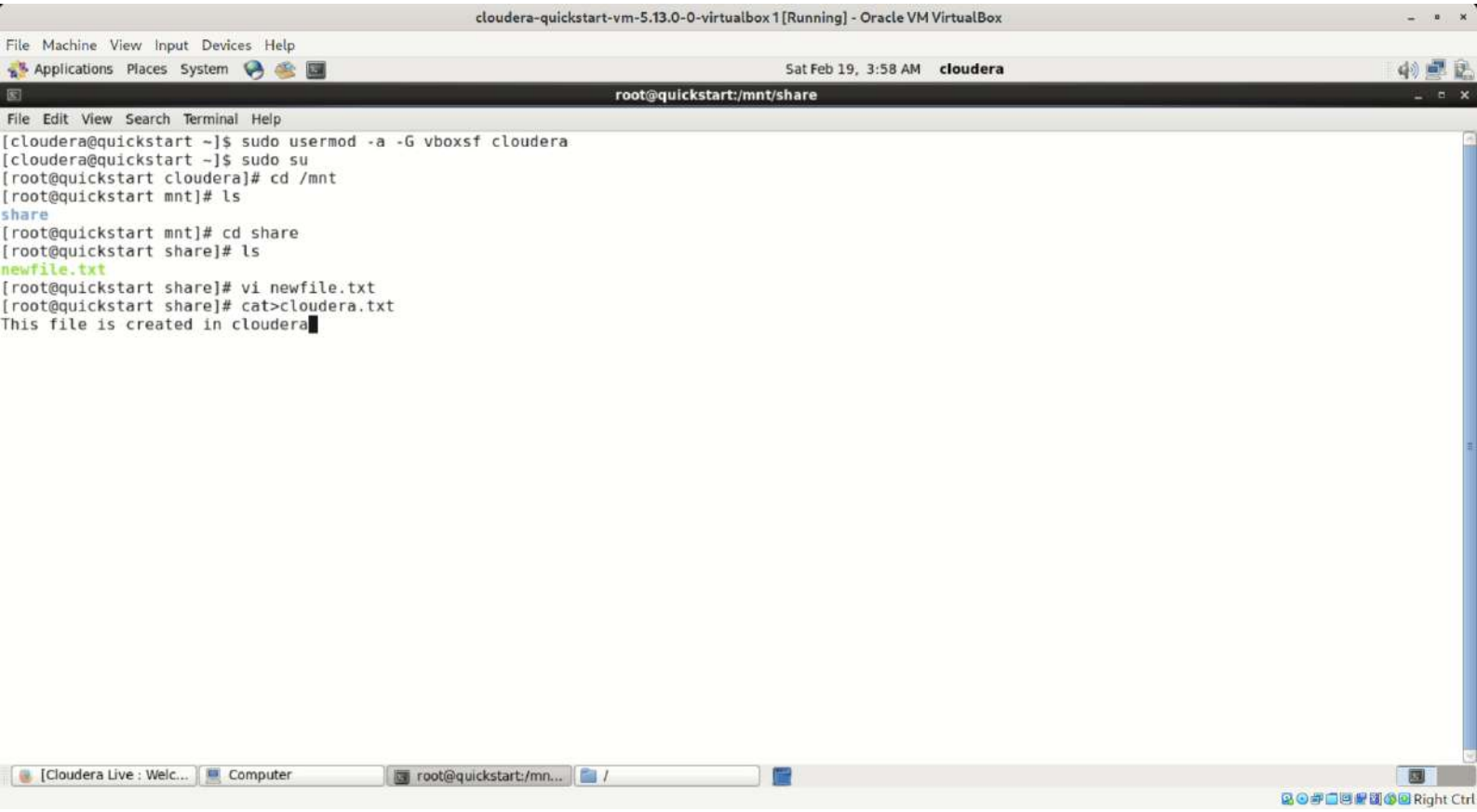

cloudera-quickstart-vm-5.13.0-0-virtualbox [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places System
Sat Feb 19, 3:05 AM cloudera
Computer
Launch Cloudera Express
cloudera's Home
Launch Cloudera Enterprise (trial)
Migrate to Parcels
Eclipse
Trash
Configure Kerberos
sf_Files
VBox_GAs_6.1.30
VBox_GAs_6.1.30
You have just inserted a medium with software intended to be automatically started. Choose what application to launch.
Select how to open "VBox_GAs_6.1.30" and whether to perform this action in the future for other media of type "UNIX software".
Open Autorun Prompt
Always perform this action
Eject
Cancel
OK
Right Ctrl

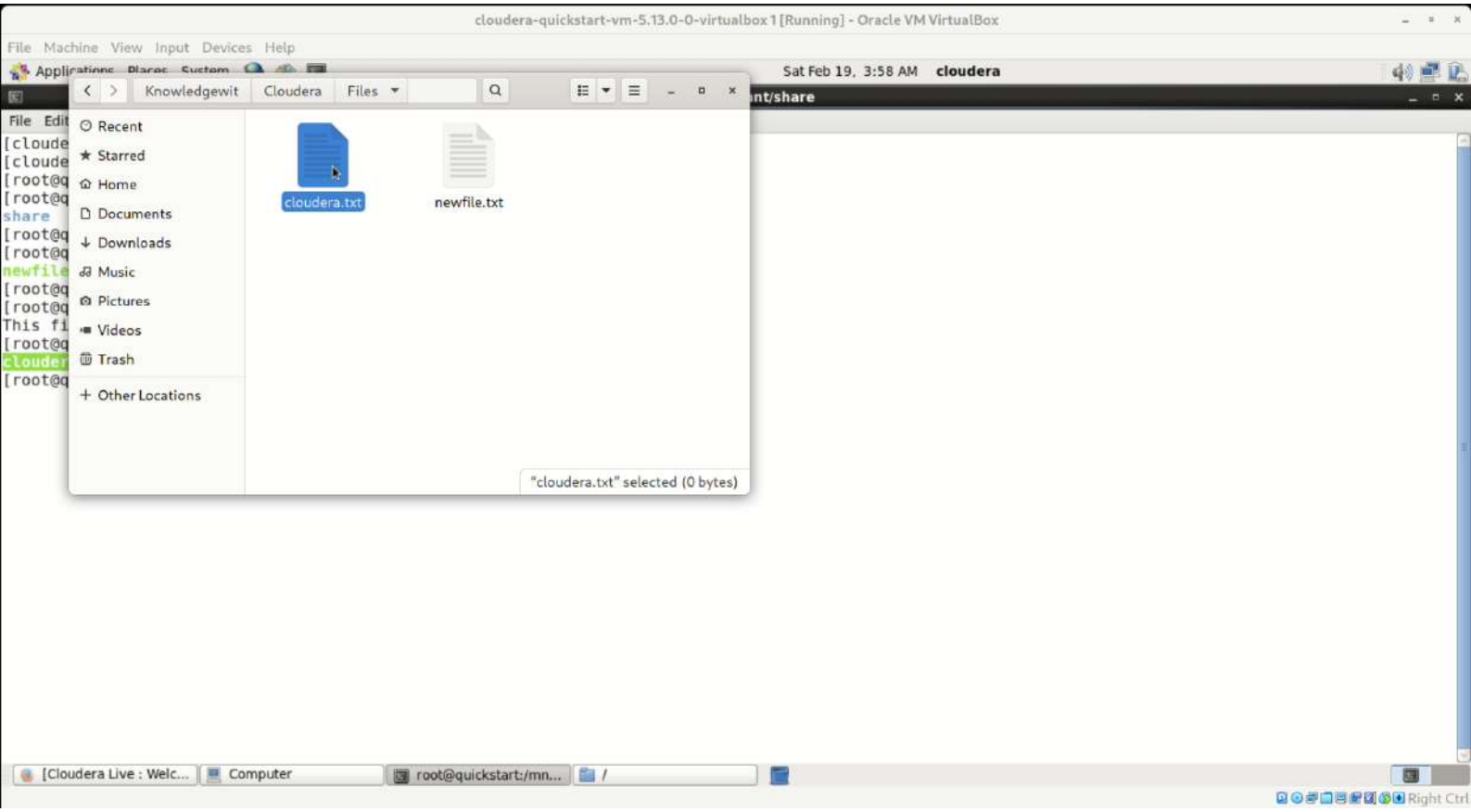

cloudera-quickstart-vm-5.13.0-0-virtualbox 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places System
Sat Feb 19, 03:47 cloudera
VirtualBox Guest Additions installation
File Edit View Search Terminal Help
Authenticate
Authentication is needed to run `/bin/sh' as the super user
An application is attempting to perform an action that requires privileges. Authentication as the super user is required to perform this action.
Password for root:
Details
Cancel
Authenticate
VBox_GAs_6.1.30


cloudera-quickstart-vm-5.13.0-0-virtualbox 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Sy
Sat Feb 19, 03:48 cloudera
Change desktop appearance
Optical Drives
Network
Shared Folders
Shared Clipboard
Drag and Drop
Insert Guest Additions CD image...
Shared Folders Settings...
File Edit V
Removing existing VirtualBox non-DKMS kernel modules [OK]
Stopping VirtualBox Guest Addition service [OK]
Copying additional installer modules ...
Installing additional modules ...
VirtualBox Guest Additions: Starting.
VirtualBox Guest Additions: Building the VirtualBox Guest Additions kernel modules. This may take a while.
VirtualBox Guest Additions: To build modules for other installed kernels, run
VirtualBox Guest Additions: /sbin/rcvboxadd quicksetup <version>
VirtualBox Guest Additions: or
VirtualBox Guest Additions: /sbin/rcvboxadd quicksetup all
VirtualBox Guest Additions: Building the modules for kernel 2.6.32-573.el6.x86_64.
VirtualBox Guest Additions: Running kernel modules will not be replaced until the system is restarted
Building the VirtualBox Guest Additions kernel modules. This may take a while.
To build modules for other installed kernels, run
/sbin/rcvboxadd quicksetup <version>
or
/sbin/rcvboxadd quicksetup all
Running kernel modules will not be replaced until the system is restarted
vboxadd-service.sh: Starting VirtualBox Guest Addition service.
Press Return to close this window...
dera
VBox_GAs_6.1.30
[Cloudera Live : Welco...
VirtualBox Guest Addit...
Right Ctrl


cloudera-quickstart-vm-5.13.0-0-virtualbox 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places System
Sat Feb 19, 03:49 cloudera
Change desktop appearance and behavior, get help, or log out
VirtualBox Guest
File Edit View Search Terminal He
Removing existing VirtualBox non-DK
Stopping VirtualBox Guest Addition
Copying additional installer module
Installing additional modules ...
VirtualBox Guest Additions: Startin
VirtualBox Guest Additions: Buildin
modules. This may take a while.
VirtualBox Guest Additions: To buil
VirtualBox Guest Additions: /sbin
VirtualBox Guest Additions: or
VirtualBox Guest Additions: /sbin
VirtualBox Guest Additions: Buildin
2.6.32-573.el6.x86_64.
VirtualBox Guest Additions: Running
the system is restarted
Building the VirtualBox Guest Addit
To build modules for other installe
/sbin/rcvboxadd quicksetup <versi
or
/sbin/rcvboxadd quicksetup all
Running kernel modules will not be
vboxadd-service.sh: Starting Virtua
Press Return to close this window..
cloudera-quickstart-vm-5.13.0-0-virtualbox 1 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Shared Folders
Shared Folders
Name Path Access Auto Mount At
Machine
Transient
Add Share
Folder Path: /ho...era/Files
Folder Name: Files
Read-only
Auto-mount
Mount point: /mnt/share
Make Permanent
Cancel
OK
Invalid settings detected
Cancel
OK
[Cloudera Live : Welco...
VirtualBox Guest Addit...
Right Ctrl


cloudera-quickstart-vm-5.13.0-0-virtualbox 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Sat Feb 19, 3:57 AM cloudera
Knowledgewit
Cloudera
Files
Open
newfile.txt
~/Knowledgewit/Cloudera/Files
Save
1 This is a file written in host machine
Loading file "/home/crypticani/Kno... Plain Text Tab Width: 8 Ln 1, Col 39 INS
[Cloudera Live : Welc...
Computer
root@quickstart:/mn...
/
Right Ctrl


cloudera-quickstart-vm-5.13.0-0-virtualbox 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places System
Sat Feb 19, 3:58 AM cloudera
root@quickstart:/mnt/share
File Edit View Search Terminal Help
[cloudera@quickstart ~]$ sudo usermod -a -G vboxsf cloudera
[cloudera@quickstart ~]$ sudo su
[root@quickstart cloudera]# cd /mnt
[root@quickstart mnt]# ls
share
[root@quickstart mnt]# cd share
[root@quickstart share]# ls
newfile.txt
[root@quickstart share]# vi newfile.txt
[root@quickstart share]# cat>cloudera.txt
This file is created in cloudera
[Cloudera Live : Welc...
Computer
root@quickstart:/mn...
/
Right Ctrl


cloudera-quickstart-vm-5.13.0-0-virtualbox 1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Sat Feb 19, 3:58 AM cloudera
Knowledgewit
Cloudera
Files
Recent
Starred
Home
Documents
Downloads
Music
Pictures
Videos
Trash
Other Locations
cloudera.txt
newfile.txt
"cloudera.txt" selected (0 bytes)
[Cloudera Live : Welc...
Computer
root@quickstart:/mn...
/
Right Ctrl