



Quick Guide to Clonezilla

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General Information

- Software
 - clonezilla ISO file for respective CPU architecture
 - Reference: clonezilla.org
- Hardware
 - Network-based storage (NFS, CIFS, SSHFS) or USB hard drive
 - Network-based storage can be a Windows or Linux server with respective file system listed above

General Information

- Network

- Network devices management IP and console IP are accessible from Cisco corporate or internal network
- Not all of the host devices will be accessible from Cisco corporate or internal network. There are private networks utilized as part of the lab and demo process

- Software

- Required to have telnet client
- Required to have Microsoft Remote Desktop client
- Recommended to have either Chrome or Firefox browser

- Reference

Access Server Remotely to Boot Clonezilla



The image shows the login interface of a Cisco Integrated Management Controller (IMC). The background is a dark blue gradient with abstract light patterns. On the left, the text 'Cisco Integrated Management Controller' is displayed in white, followed by 'ucs-c240-m3' and 'Version: 1.5(1b)'. On the right, there are two input fields: 'Username:' with the value 'admin' and 'Password:' with a masked password of ten dots. Below these fields are two buttons: 'Log In' and 'Cancel'. At the bottom left, a copyright notice reads '©2008-2012, Cisco Systems, Inc. All rights reserved.'

Cisco Integrated Management Controller
ucs-c240-m3
Version: 1.5(1b)

Username: admin
Password: ••••••••••

Log In Cancel

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Access KVM Console

The screenshot displays the Cisco Integrated Management Controller (CIMC) web interface. The top header shows the Cisco logo and the text "Cisco Integrated Management Controller". On the right, it indicates the CIMC Hostname is "ucs-c240-m3" and the user is logged in as "admin@172.29.17". A "Log Out" link is also present.

The main content area is titled "Server Summary" and is divided into several sections:

- Overall Server Status:** Shows a green checkmark and the word "Good".
- Actions:** A list of server management actions with corresponding icons:
 - Power On Server
 - Power Off Server
 - Shut Down Server
 - Power Cycle Server
 - Hard Reset Server
 - Launch KVM Console
 - Turn On Locator LED
- Server Properties:** A box containing the following information:
 - Product Name: UCS C240 M3S
 - Serial Number: FCH1712V0JC
 - PID: UCSC-C240-M3S
 - UUID: 61190ADE-1566-481F-B0DC-5694ADBD738B
 - BIOS Version: C240M3.1.5.1c.0 (Build Date: 01/31/2013)
 - Description: DFA2-OPENSTACK-CONTROLLER
- Server Status:** A box showing the current status of various components:
 - Power State: On
 - Overall Server Status: Good
 - Temperature: Good
 - Power Supplies: Good
 - Fans: Good
 - Locator LED: Off
 - Overall Storage Status: Good
- Cisco Integrated Management Controller (CIMC) Information:** A section at the bottom of the main content area.

At the bottom right of the interface, there are two buttons: "Save Changes" and "Reset Values".

Access KVM Console

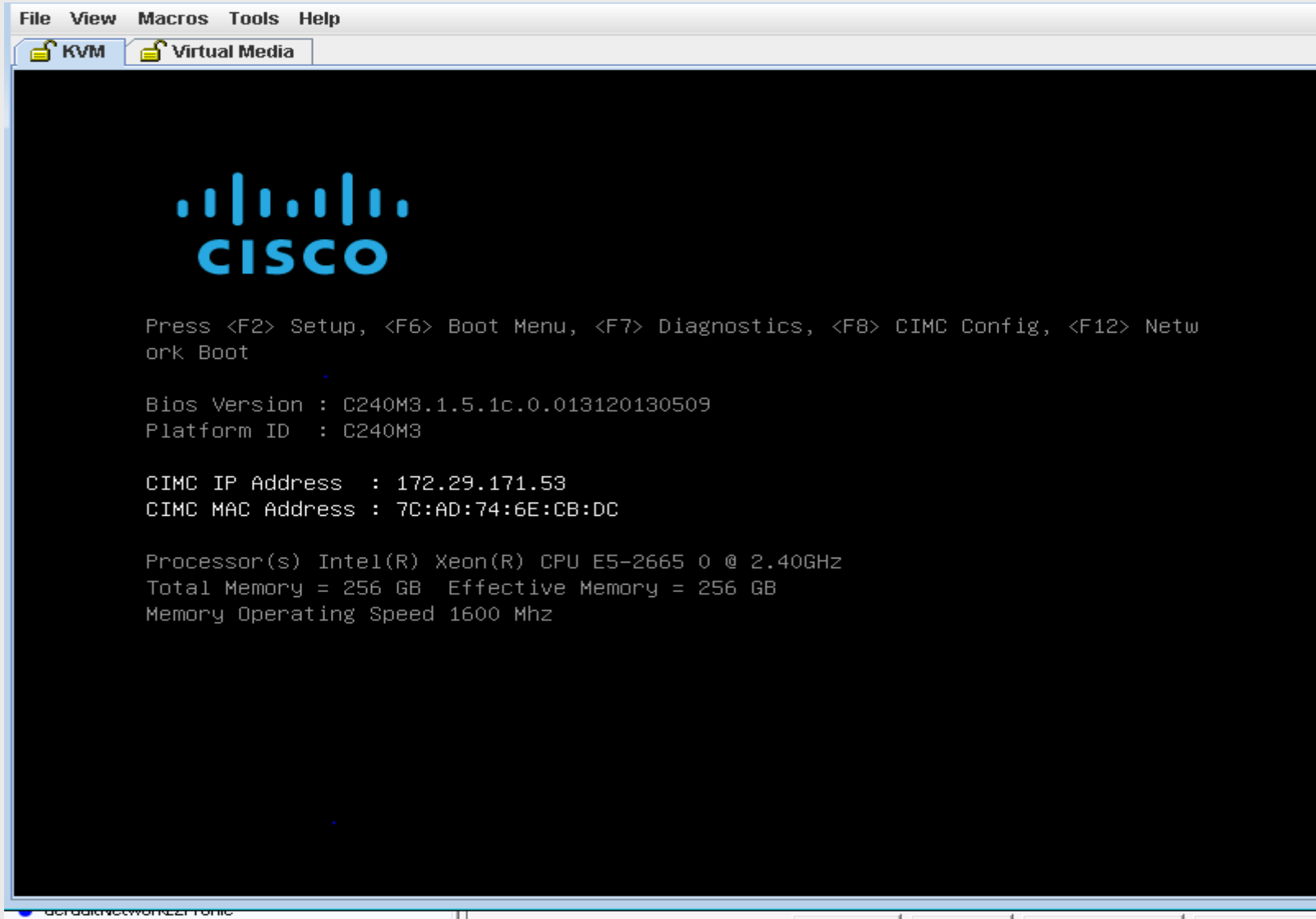
The screenshot displays the Cisco Integrated Management Controller (CIMC) web interface. The top header shows the Cisco logo and the title "Cisco Integrated Management Controller". On the right, it indicates the CIMC Hostname is "ucs-c240-m3", the user is logged in as "admin@172.29.17", and there is a "Log Out" link.

The main content area is titled "Server Summary" and is divided into several sections:

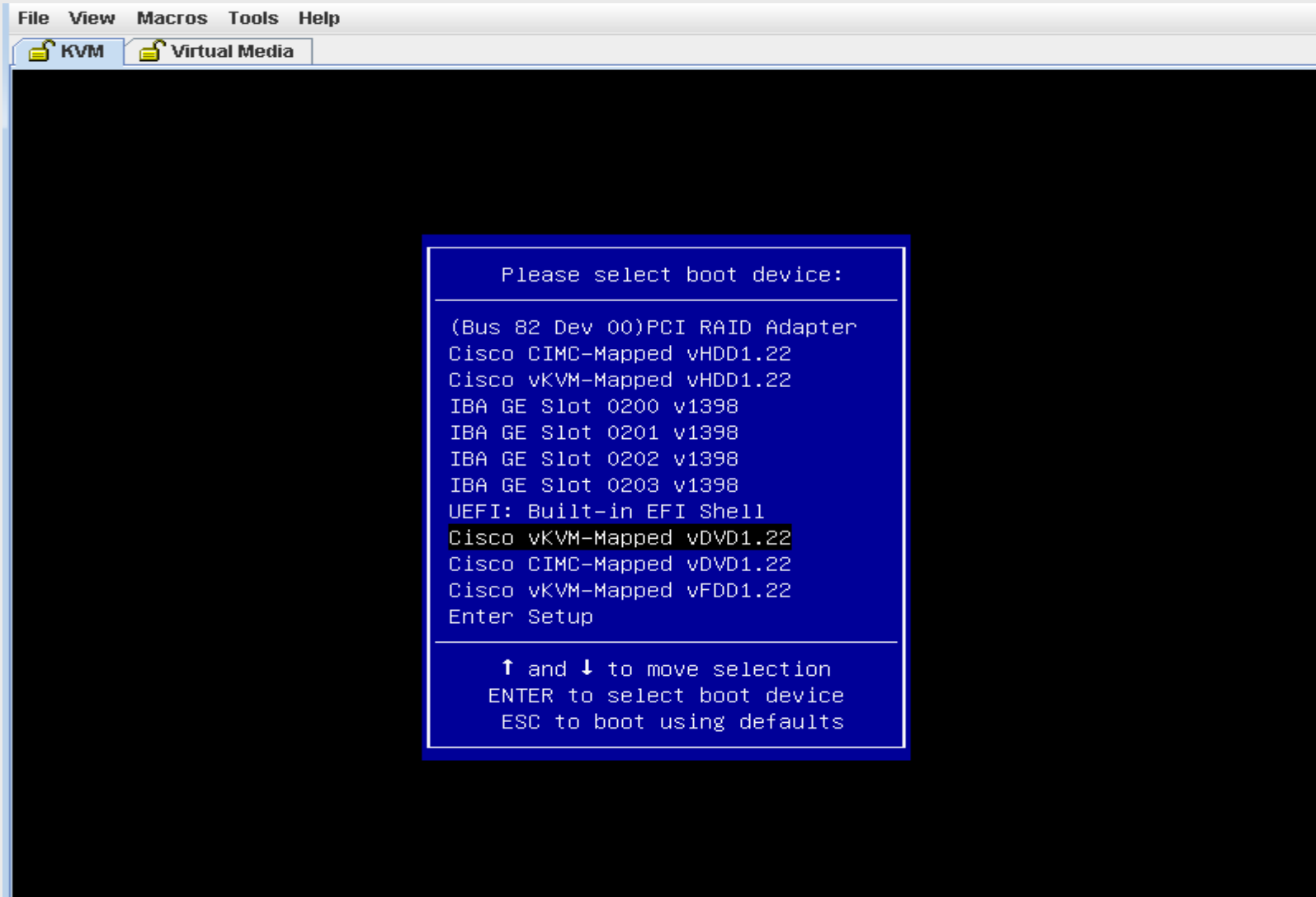
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- Server Status:** A box showing the current status of various components:
 - Power State: On
 - Overall Server Status: Good
 - Temperature: Good
 - Power Supplies: Good
 - Fans: Good
 - Locator LED: Off
 - Overall Storage Status: Good

At the bottom of the interface, there is a section for "Cisco Integrated Management Controller (CIMC) Information" and two buttons: "Save Changes" and "Reset Values".

Access Boot Menu



Select vKVM vDVD



Change the boot order to CDRROM

The screenshot displays the Cisco Integrated Management Controller (CIMC) web interface. The top navigation bar includes the Cisco logo and the text "Cisco Integrated Management Controller". On the right, it shows "CIMC Host" and "Logged in".

The left sidebar contains the "Overall Server Status" (Good) and a navigation menu with options: Summary, Inventory, Sensors, System Event Log, Remote Presence, BIOS (selected), Power Policies, and Fault Summary.

The main content area is titled "BIOS" and includes a "Running Version: C200.1.4.3c.0 (Build Date: 02/29/2012)". Under the "Actions" section, there are links for "Configure BIOS", "Configure Boot Order", "Recover Corrupt BIOS", and "Clear BIOS CMOS".

The "Boot Order" section is divided into "Configured Boot Order" and "Actual Boot Order".

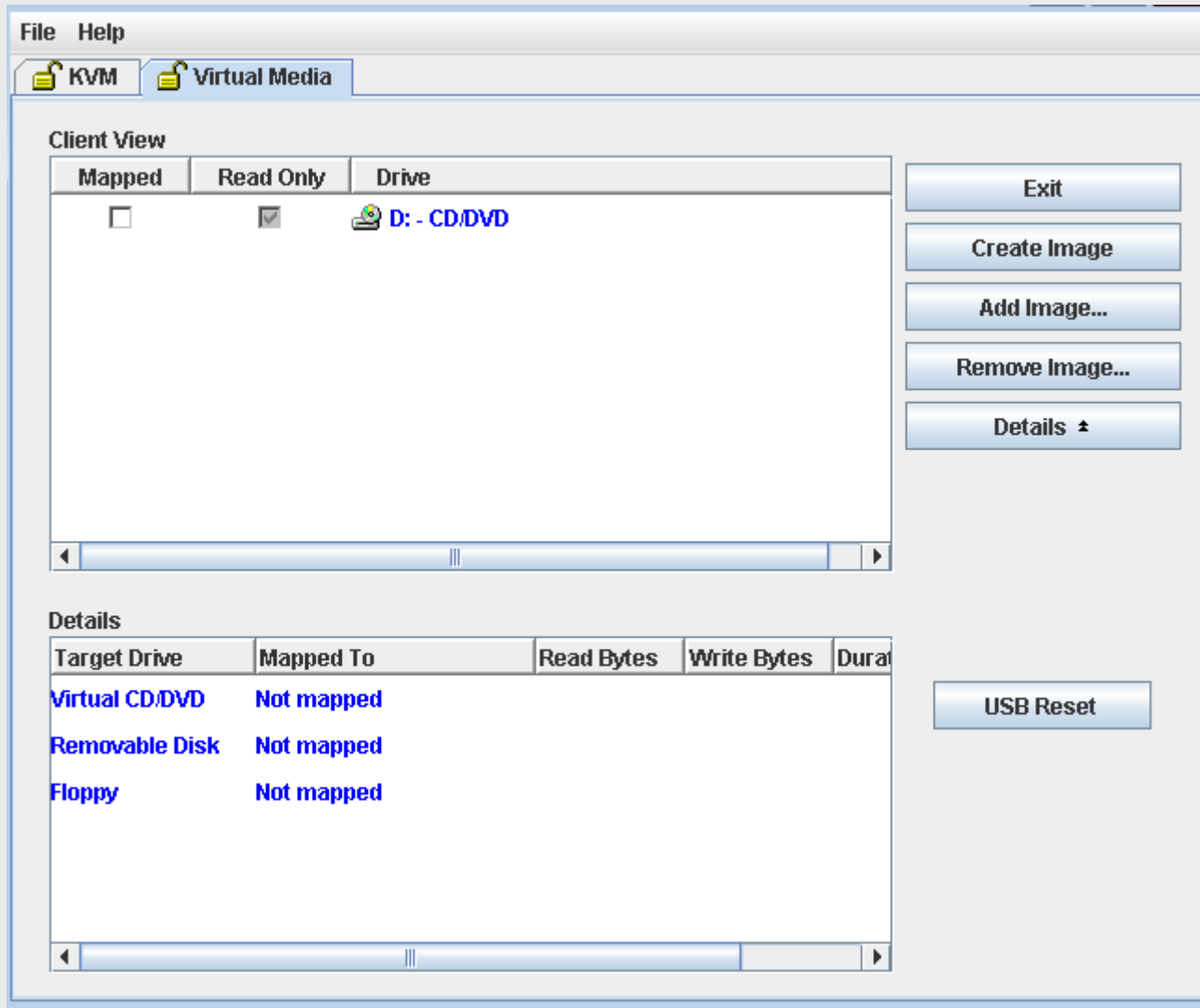
- Configured Boot Order:**
 1. CDRROM
 2. HDD
 3. PXE
- Actual Boot Order:**
 - + CD/DVD
 - + HDD
 - + Network Device (PXE)
 - + FDD
 - Internal EFI Shell

A "Configure Boot Order" dialog box is open in the foreground. It has two main sections:

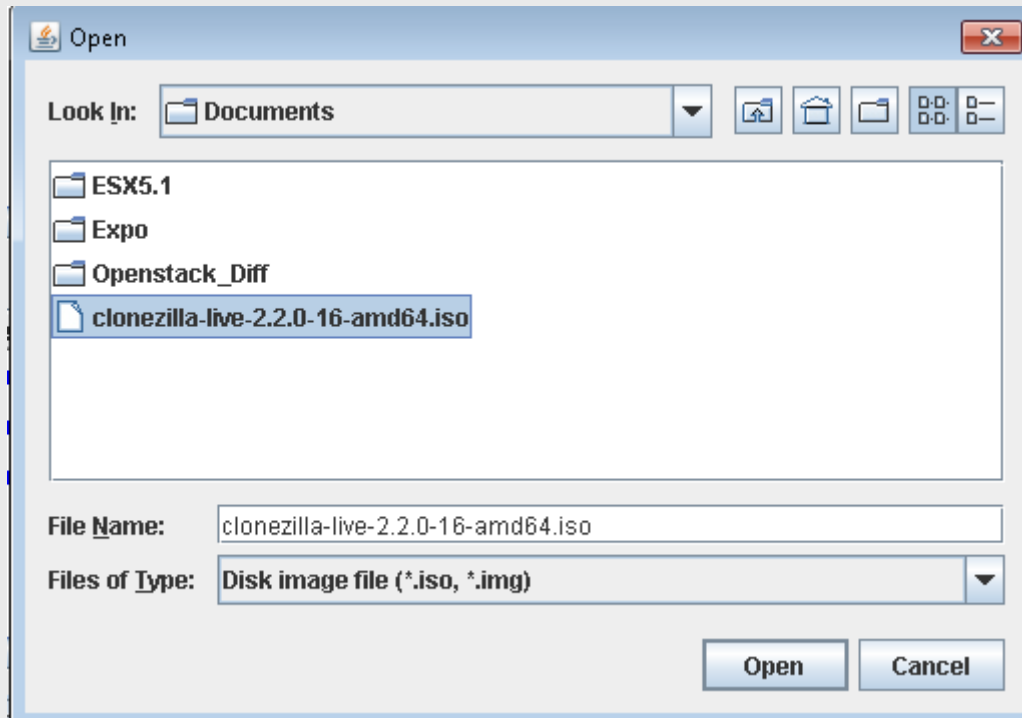
- Device Types:** A list containing "FDD" and "EFI".
- Boot Order:** A list containing "CDROM", "HDD", and "PXE".

Between these sections are "Add >" and "< Remove" buttons. To the right of the "Boot Order" list are "Up" and "Down" buttons. At the bottom of the dialog are "Apply" and "Cancel" buttons.

Select Clonezilla ISO – Add Image



Select Clonezilla ISO



Select Clonezilla ISO – Map ISO to vDVD

File Help

KVM Virtual Media

Client View

Mapped	Read Only	Drive
<input type="checkbox"/>	<input checked="" type="checkbox"/>	D: - CD/DVD
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C:\Users\cisco\Documents\clonezilla-live-2.2.0-1

Exit

Create Image

Add Image...

Remove Image...

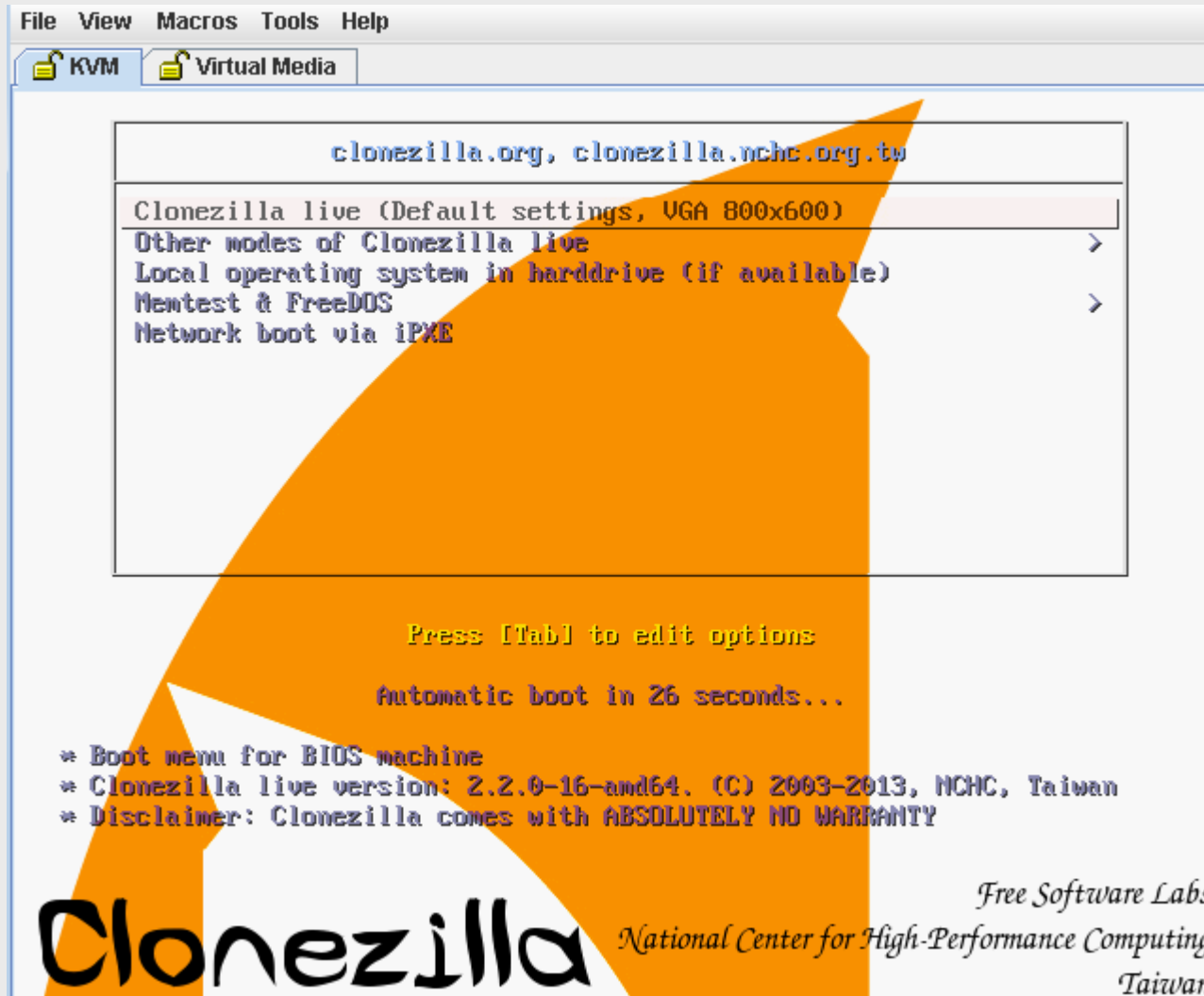
Details ▲

Details

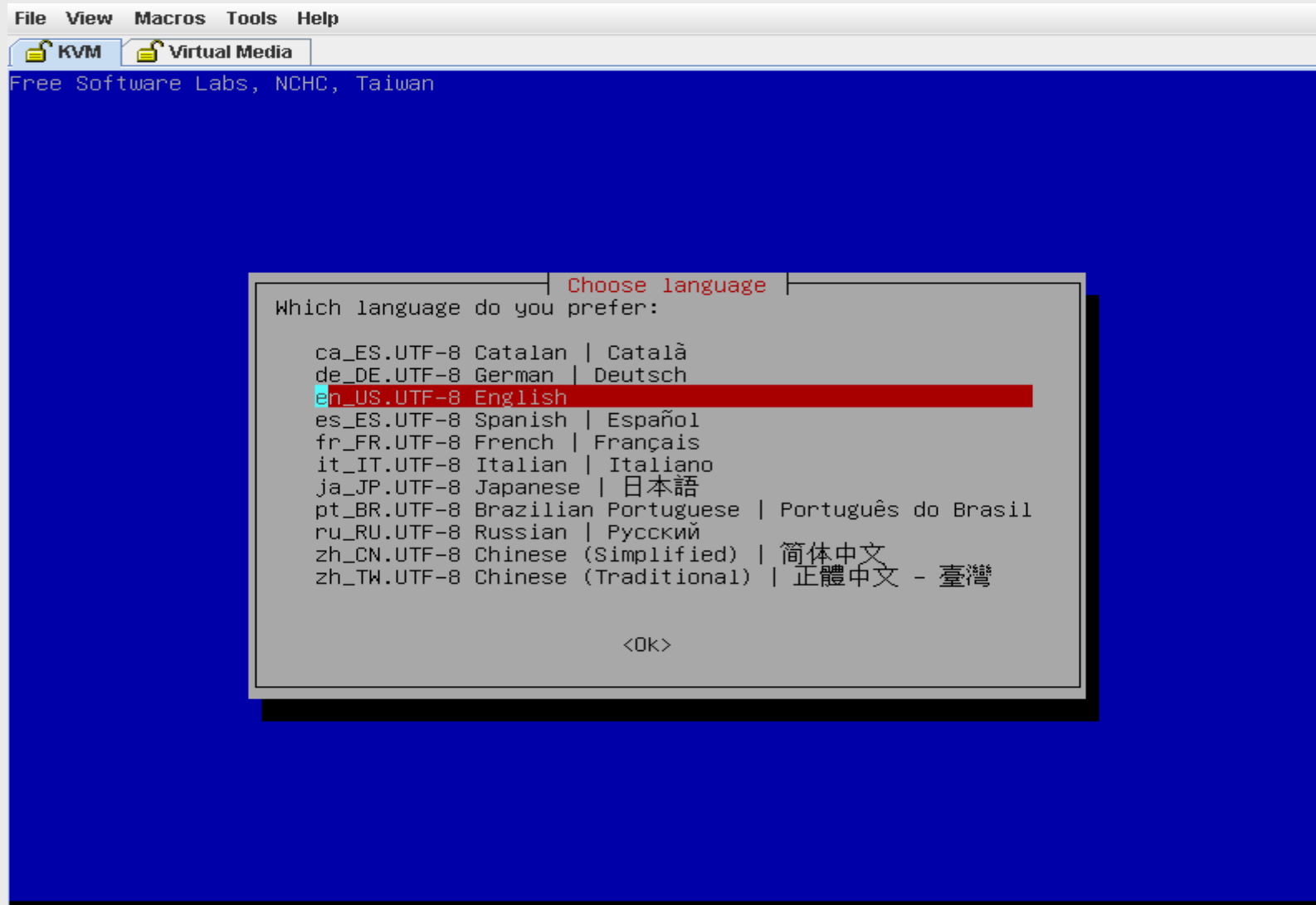
Target Drive	Mapped To	Read Bytes	Write Bytes	Duration
Virtual CD/DVD	C:\Users\cisco\Docu...	98304	0	00:00
Removable Disk	Not mapped			
Floppy	Not mapped			

USB Reset

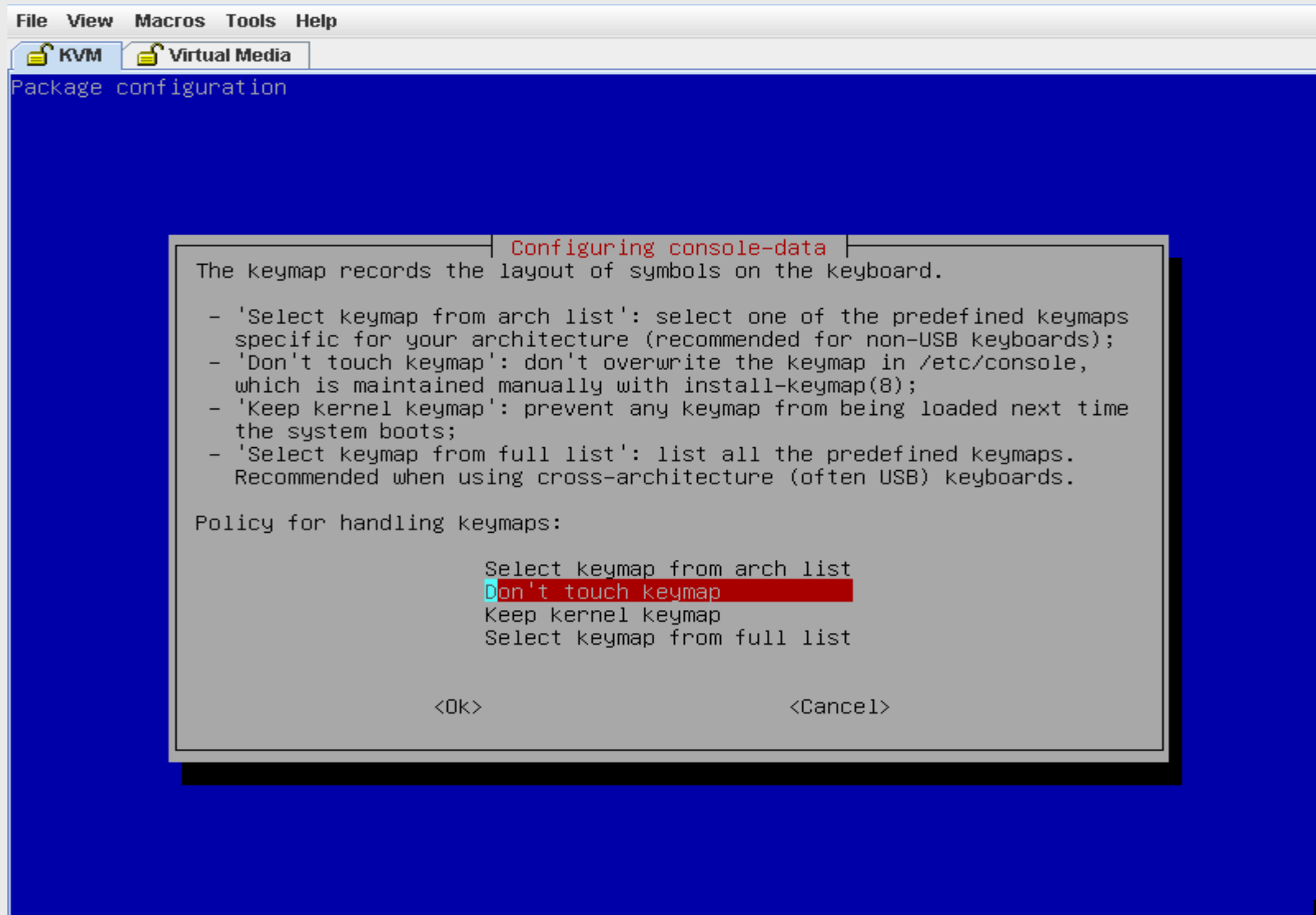
Boot Clonezilla ISO



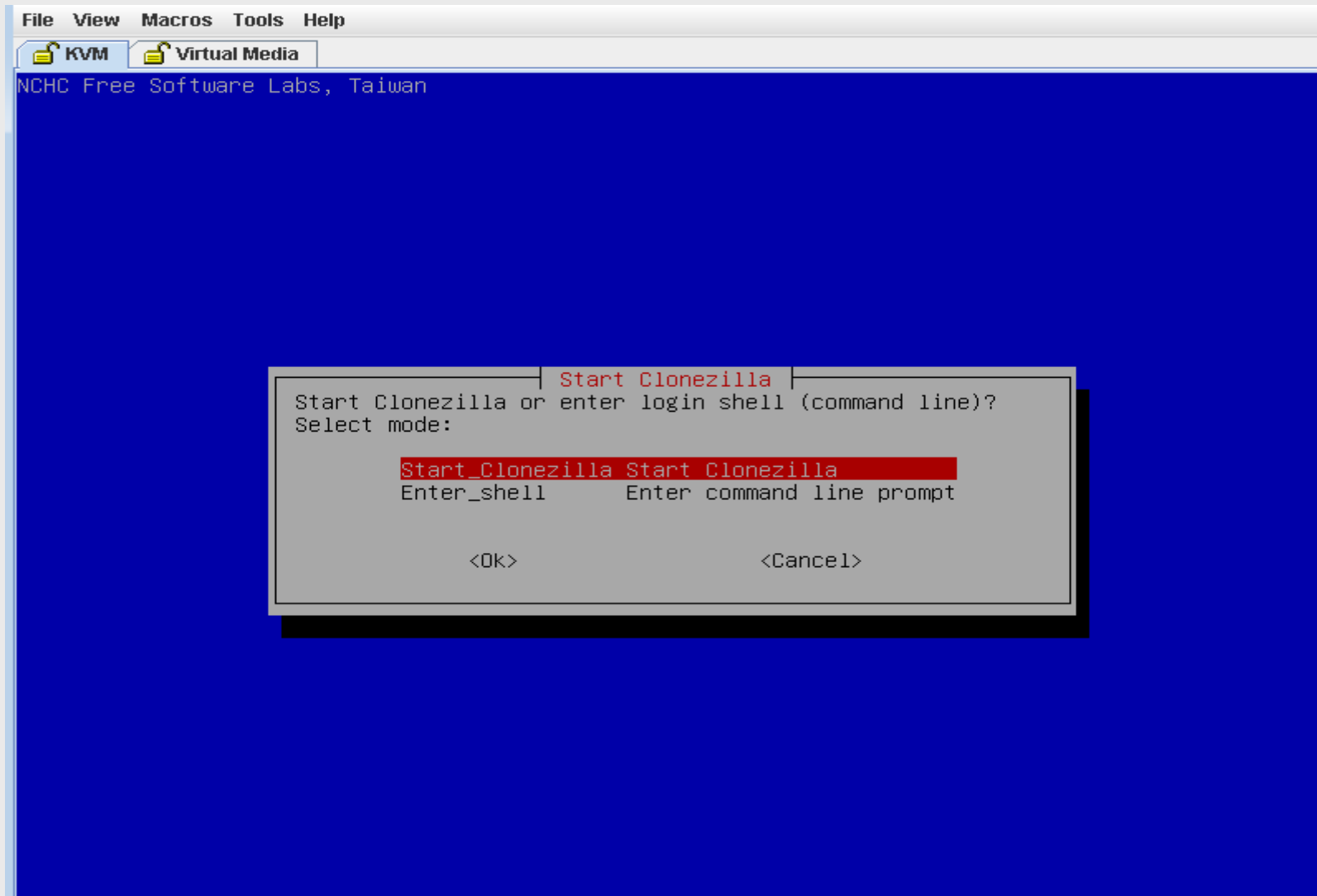
Select Language



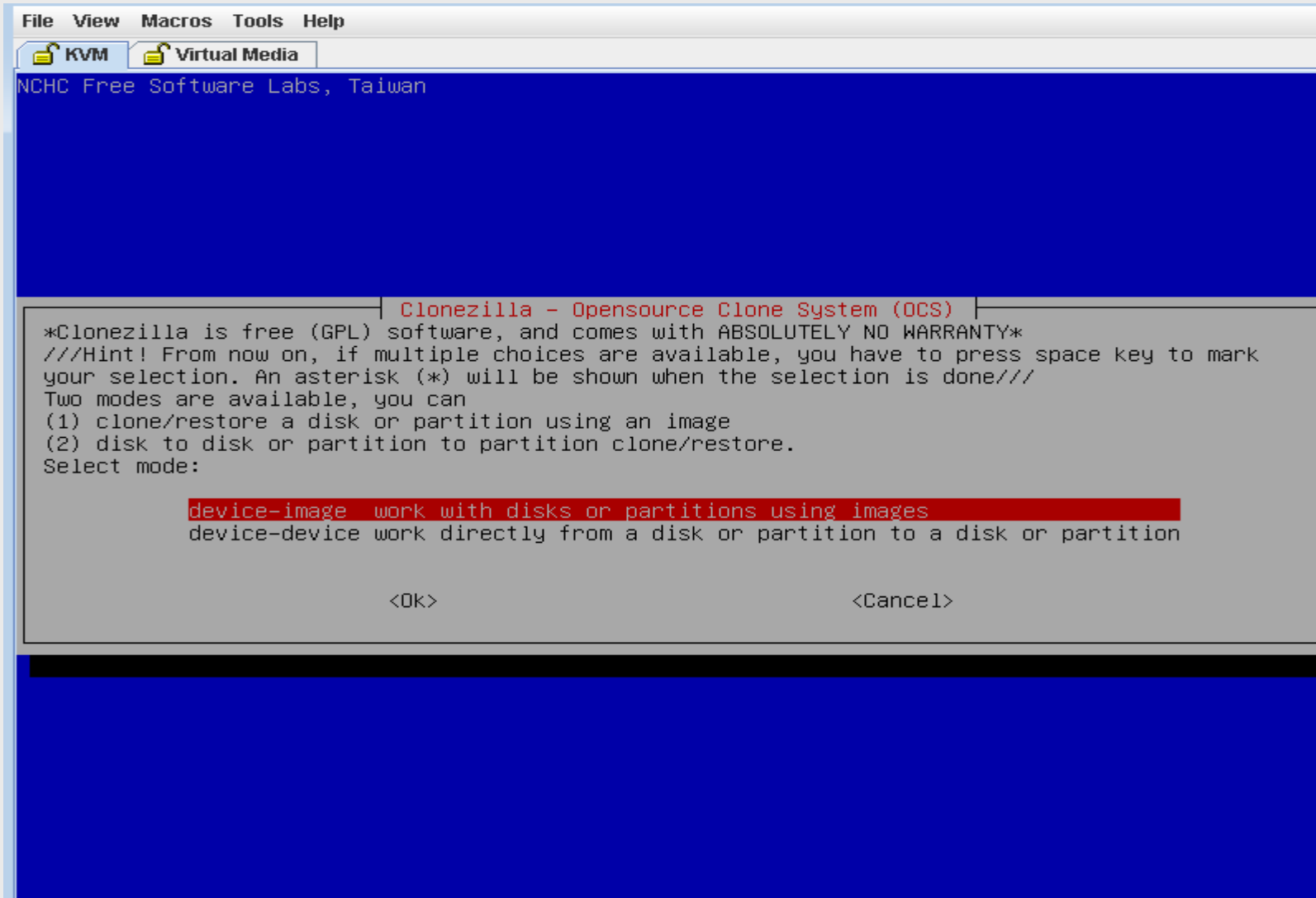
Select Keyboard Mapping



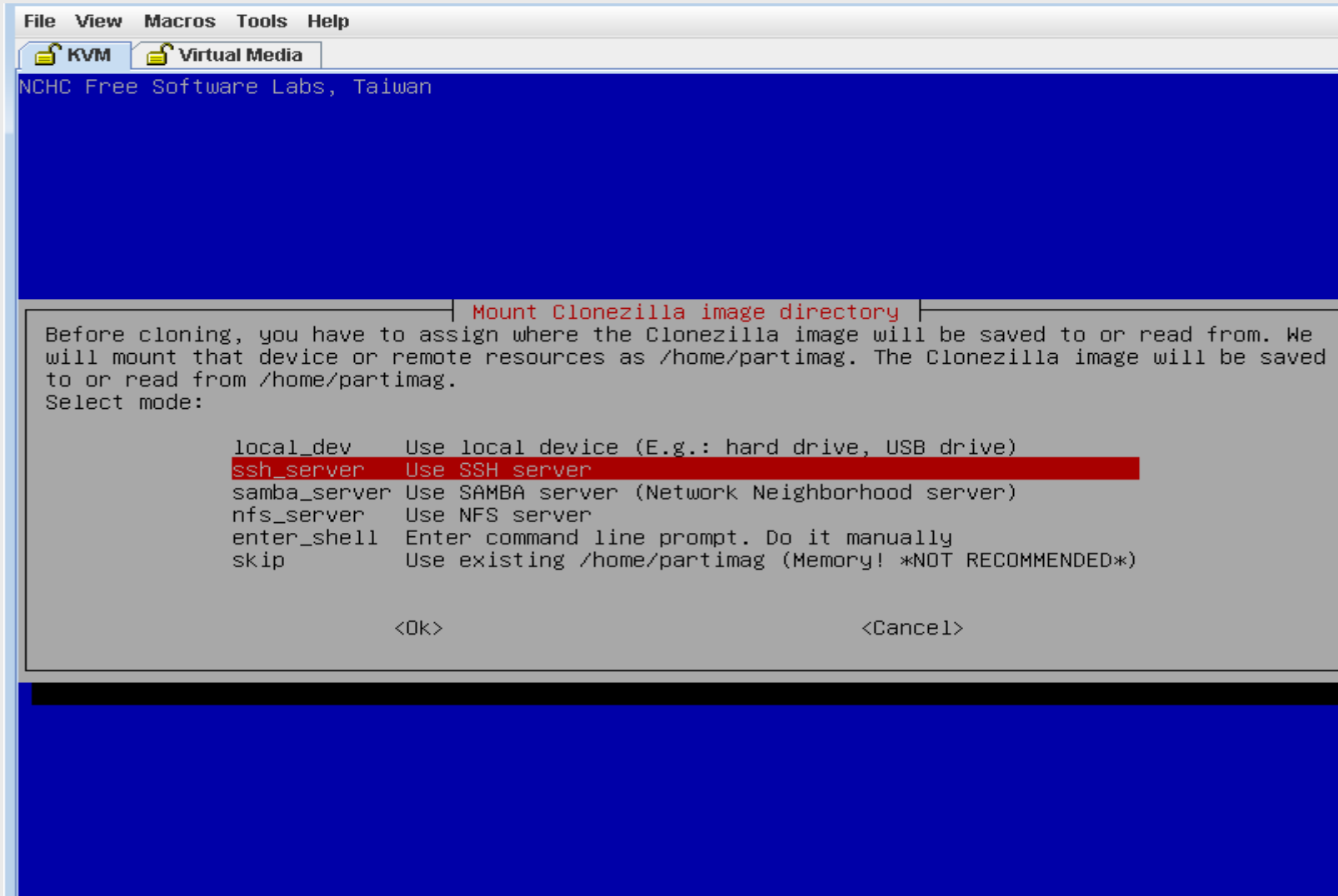
Start Clonezilla



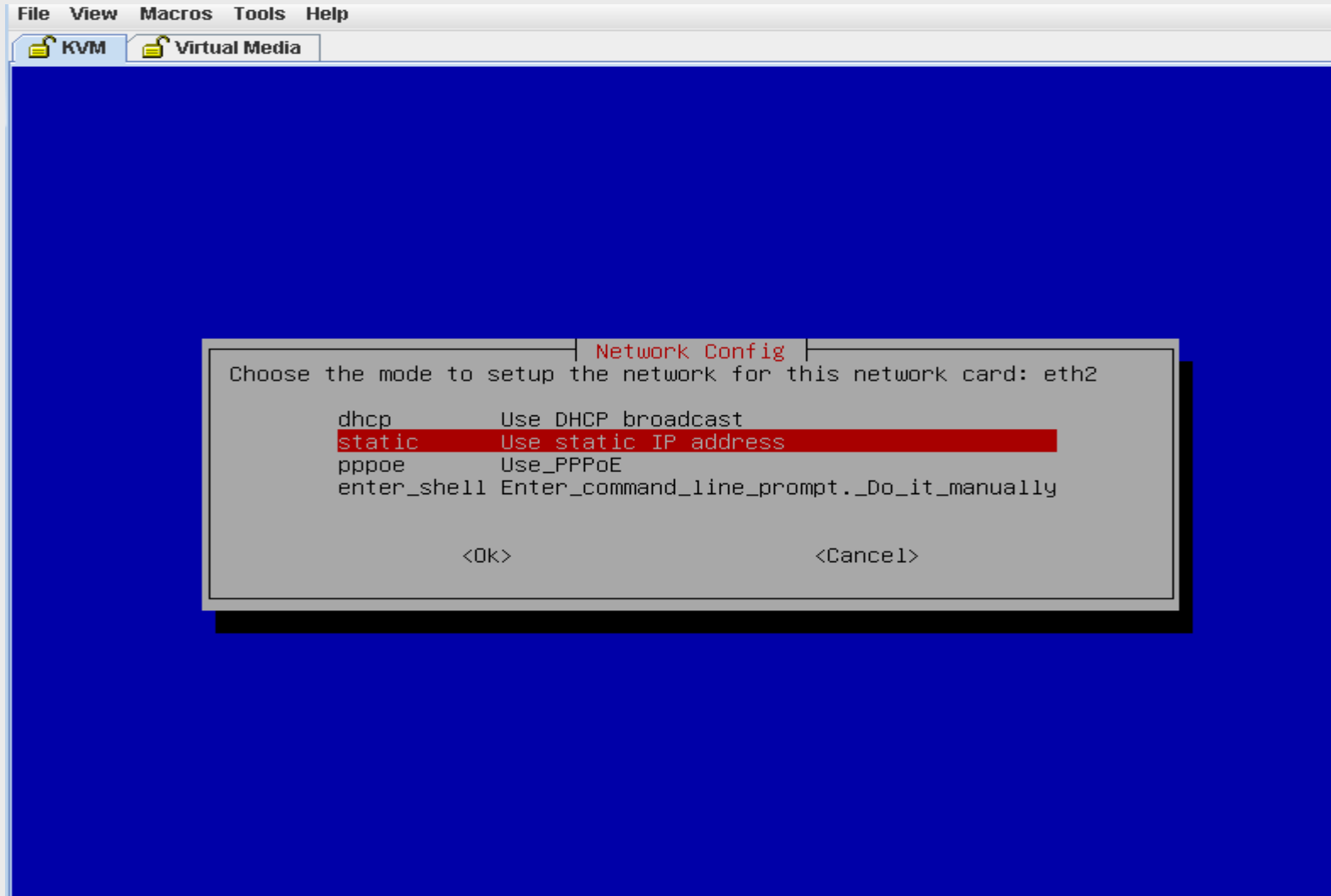
Select device-image



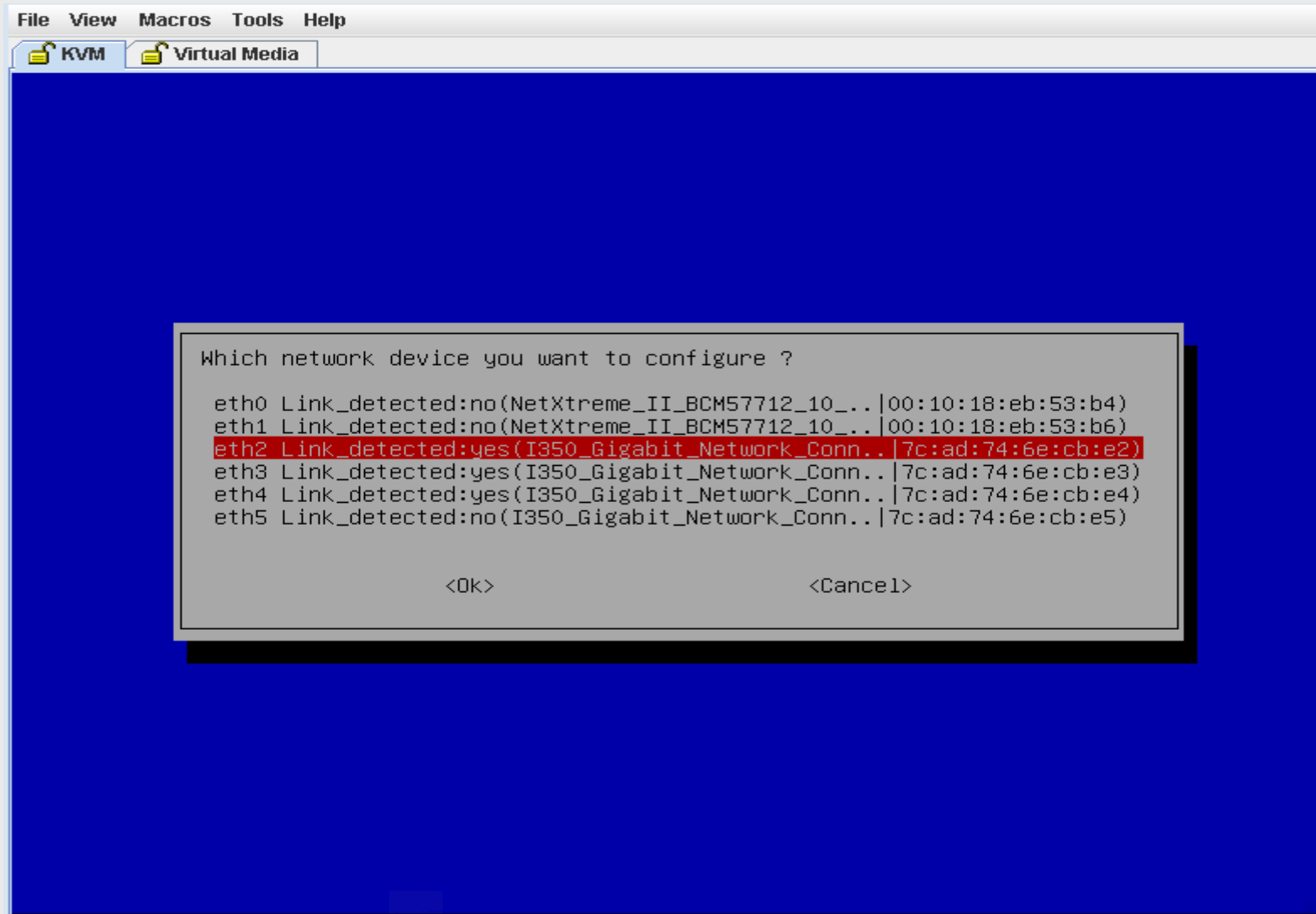
Select Image Repository - SSH Server



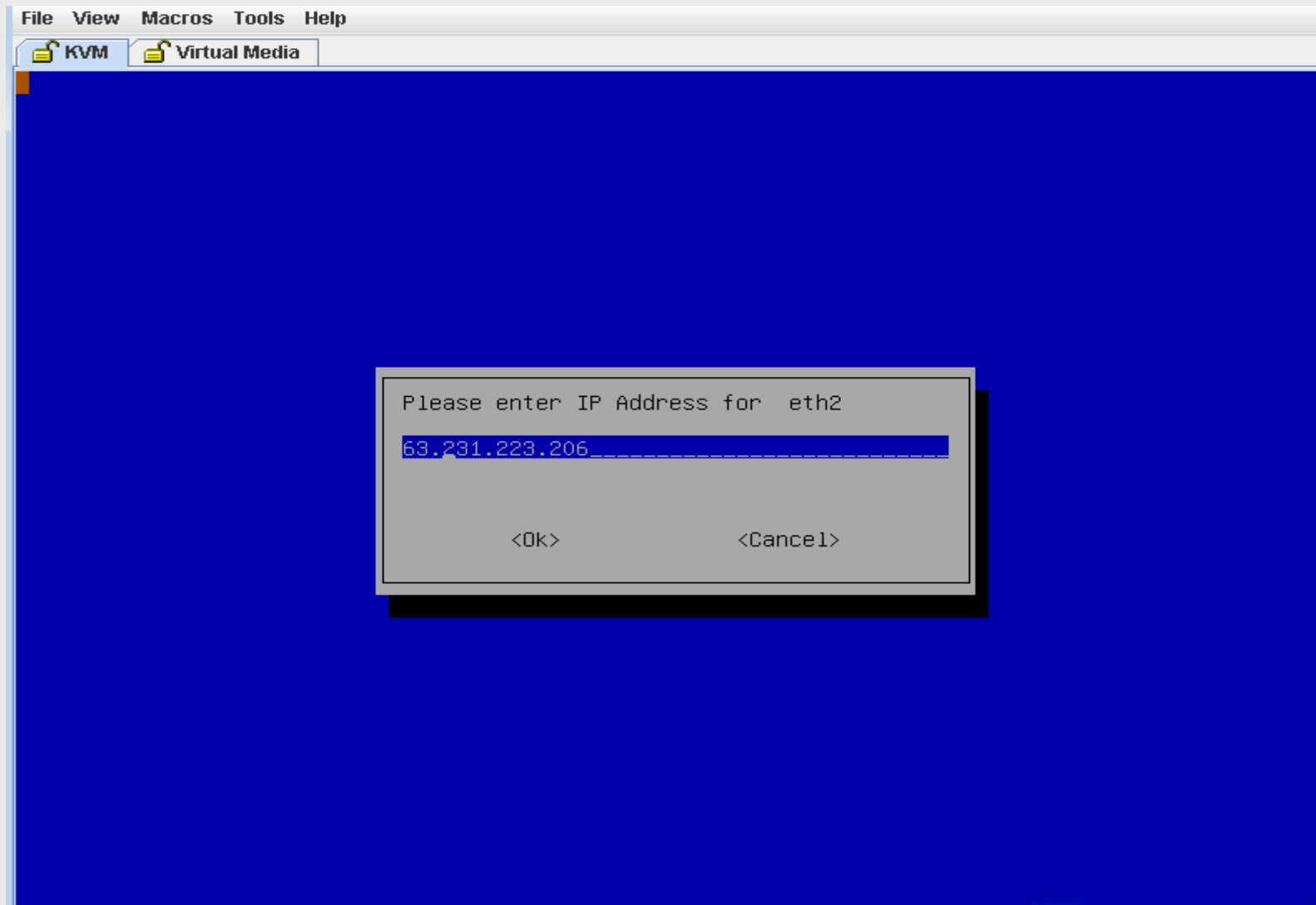
Assign Static IP



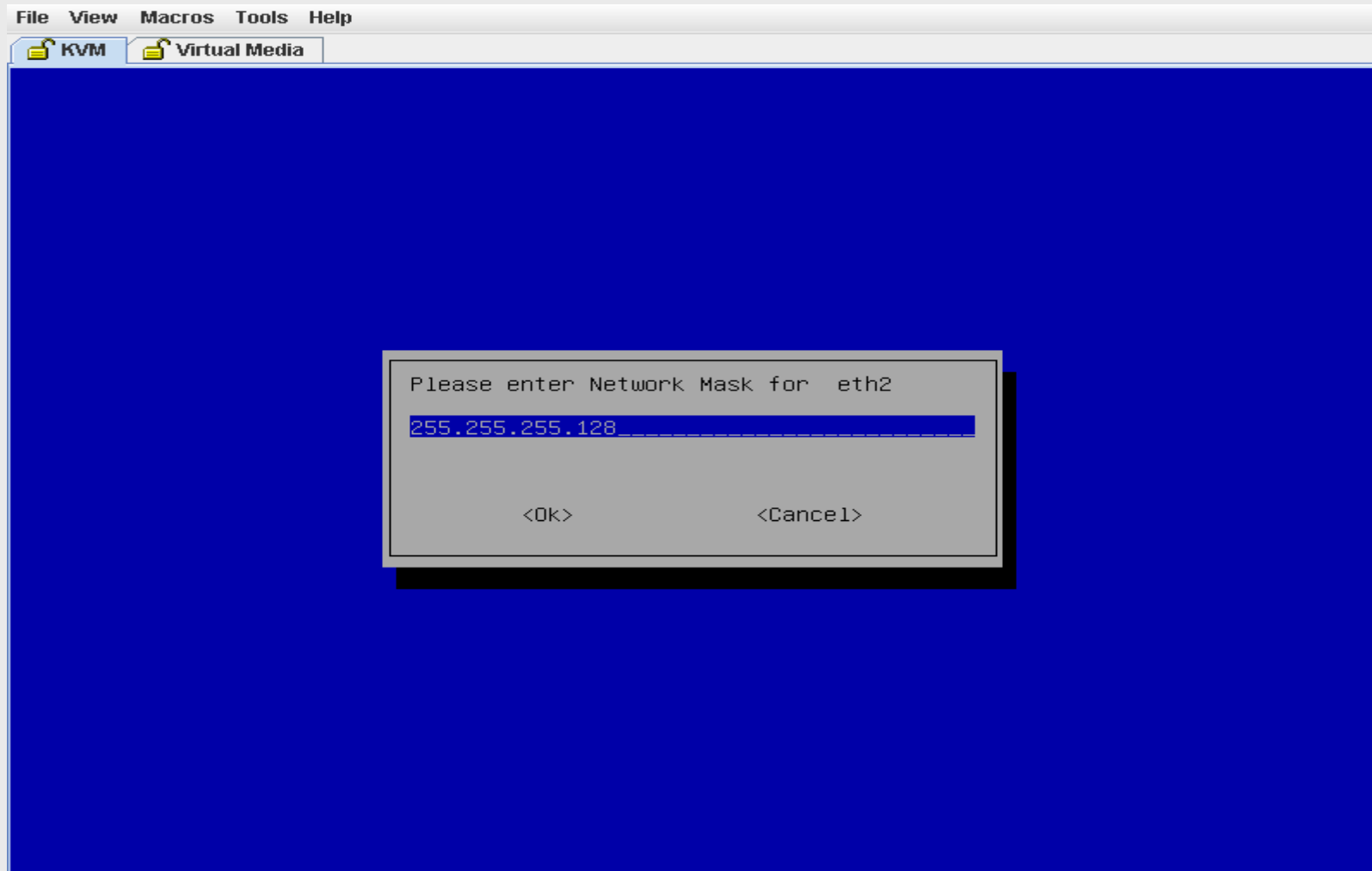
Select Ethernet0 Interface – lowest MAC address



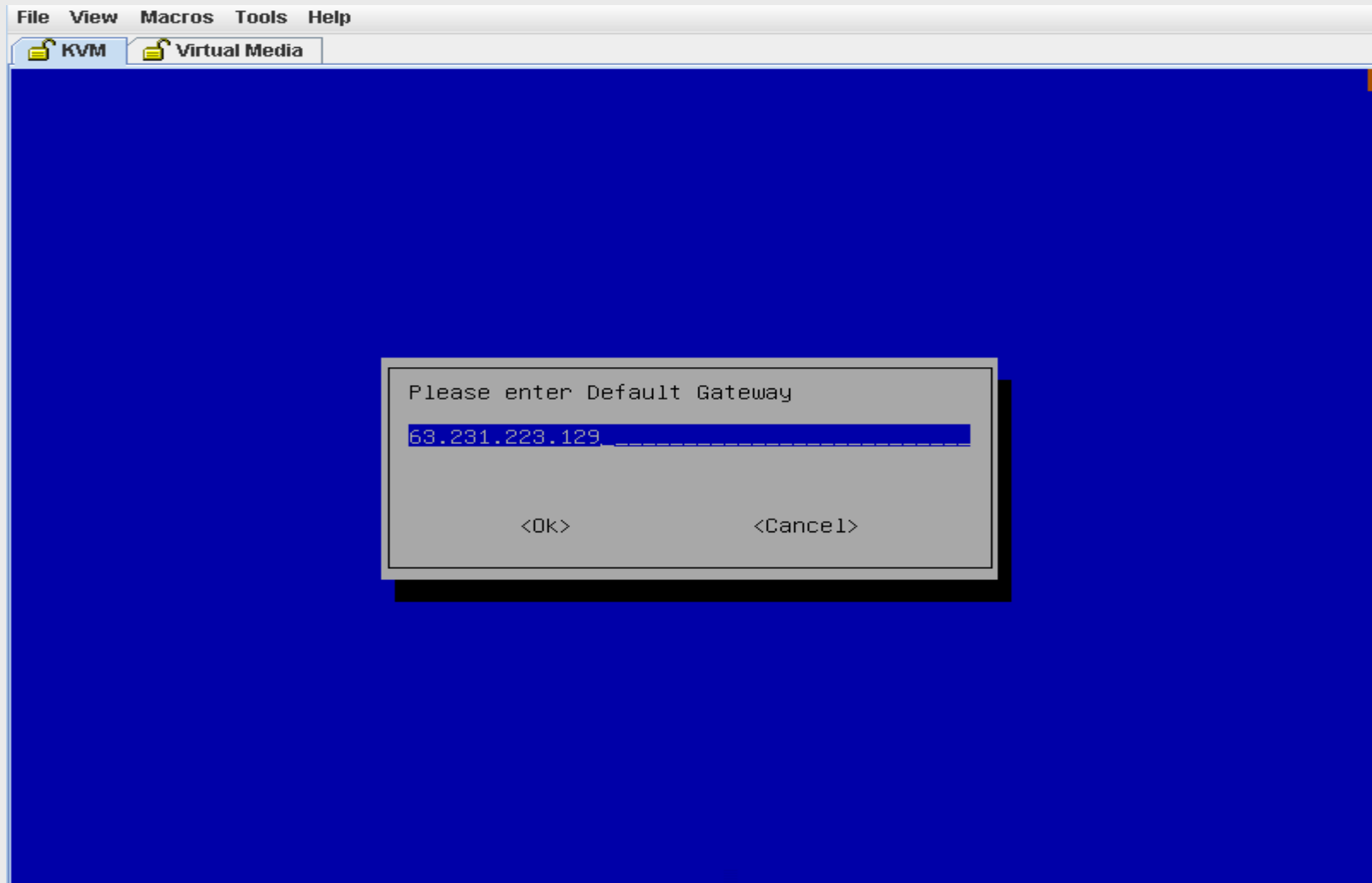
Enter Static IP



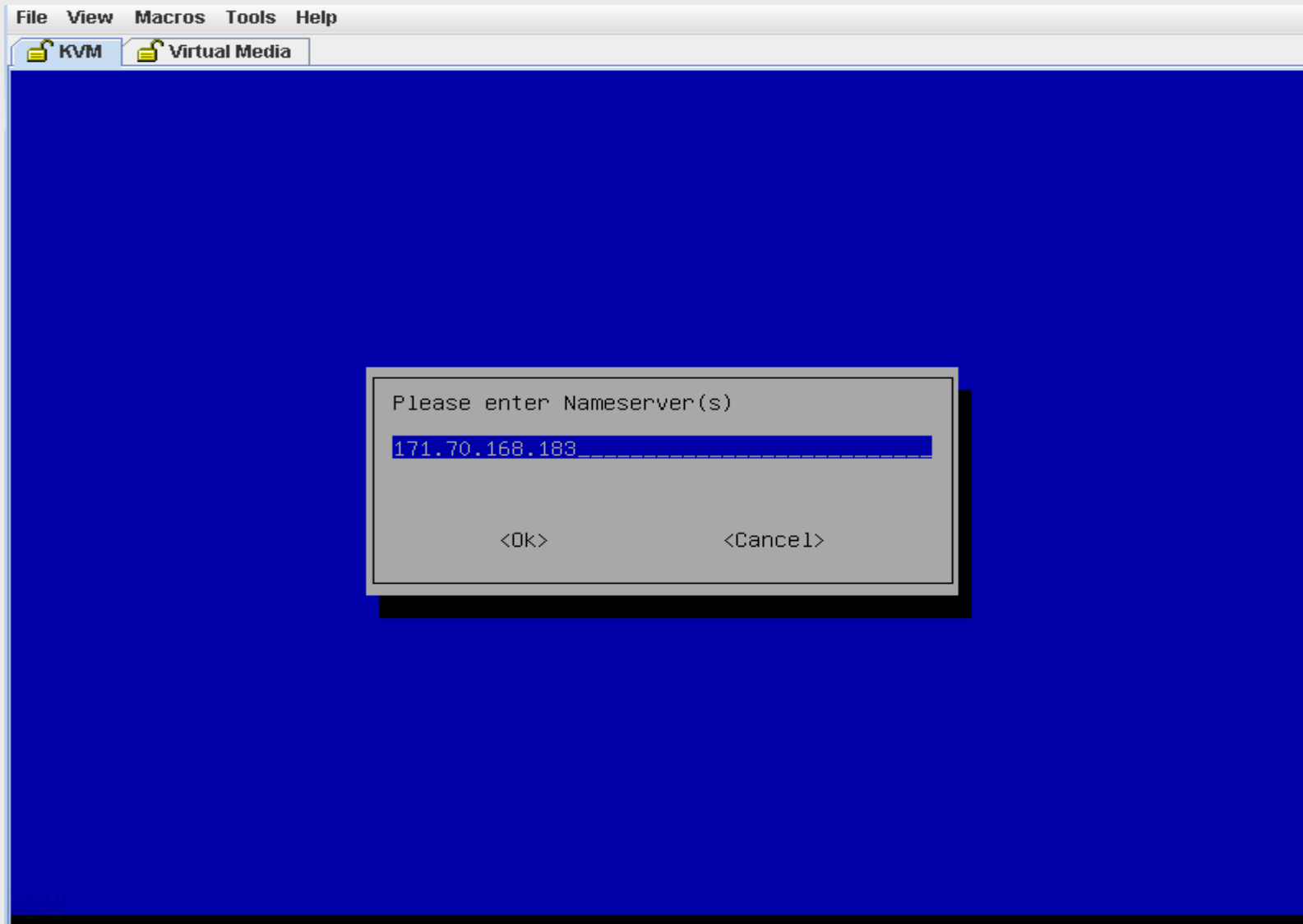
Enter Static IP Mask



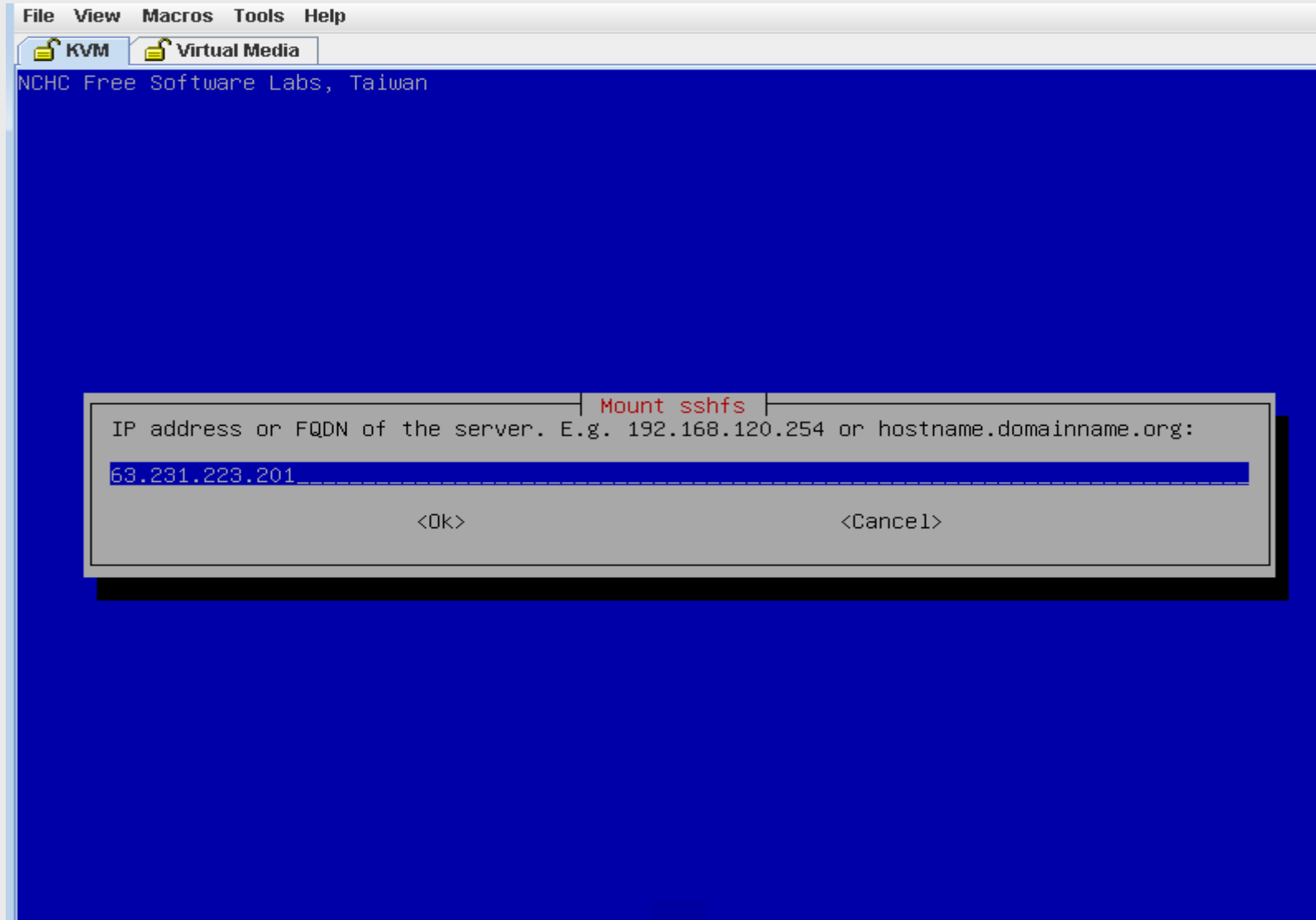
Static IP Default Gateway



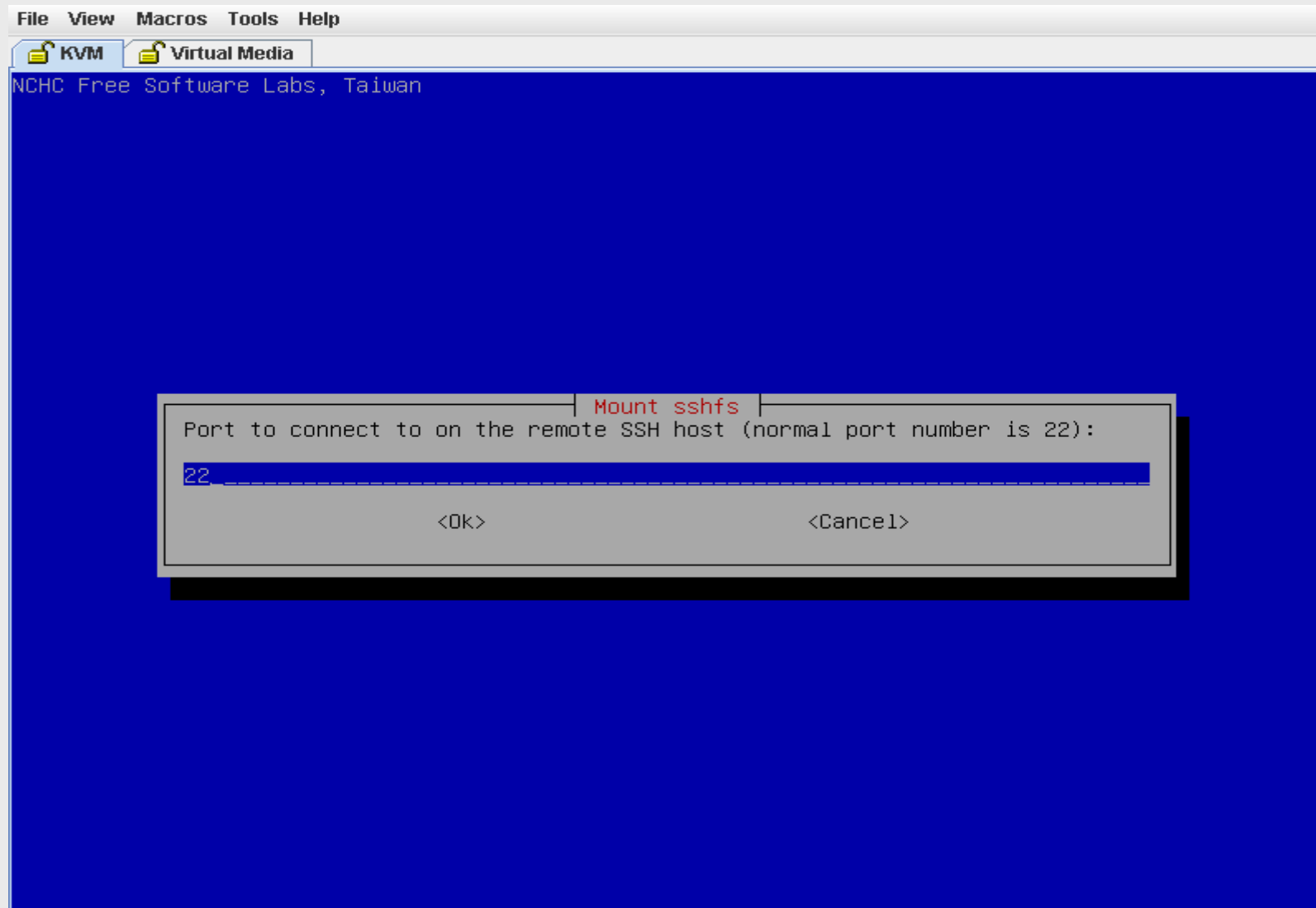
Static IP DNS



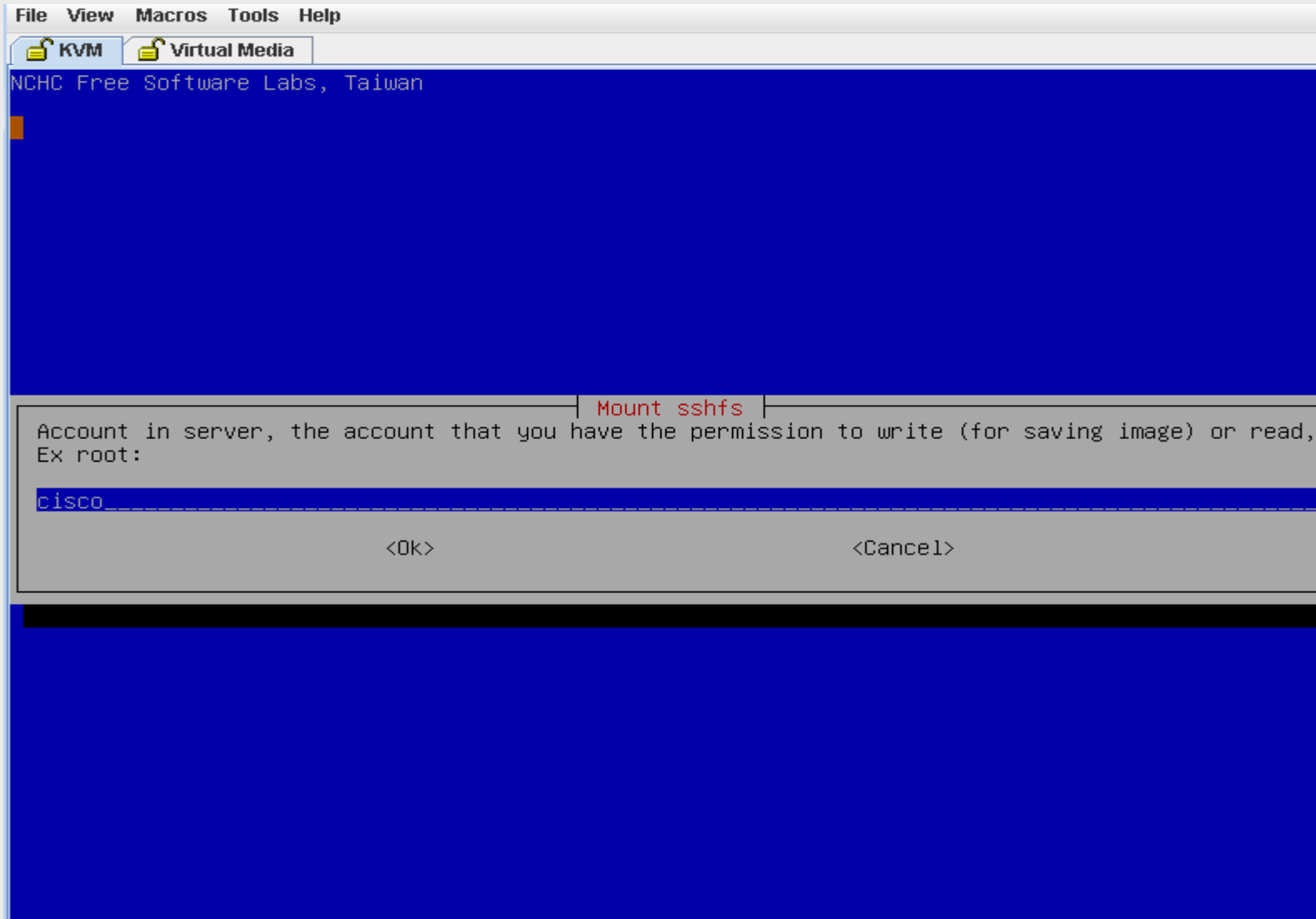
Enter Repository Server IP



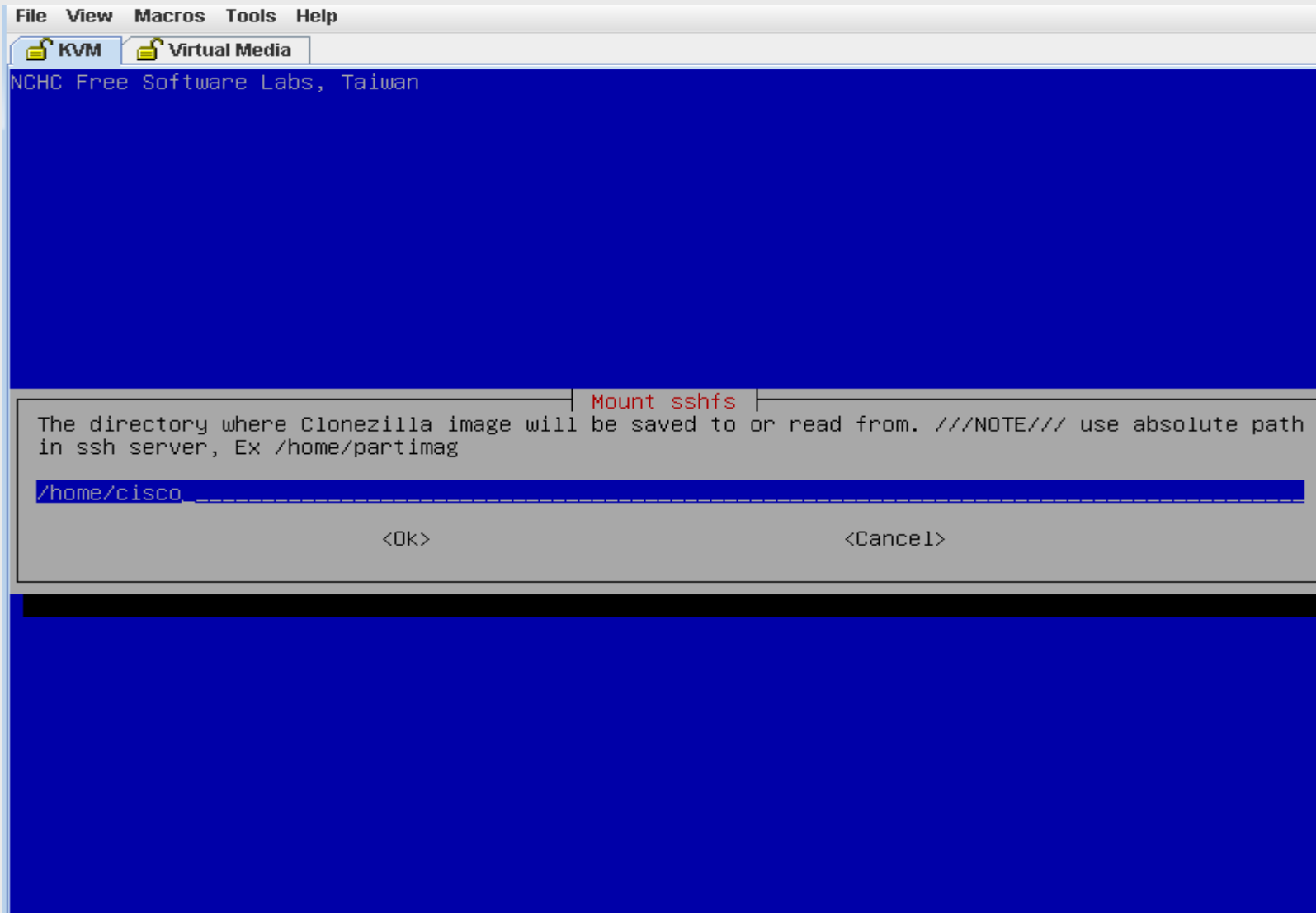
Enter Repository Server SSH Port Number



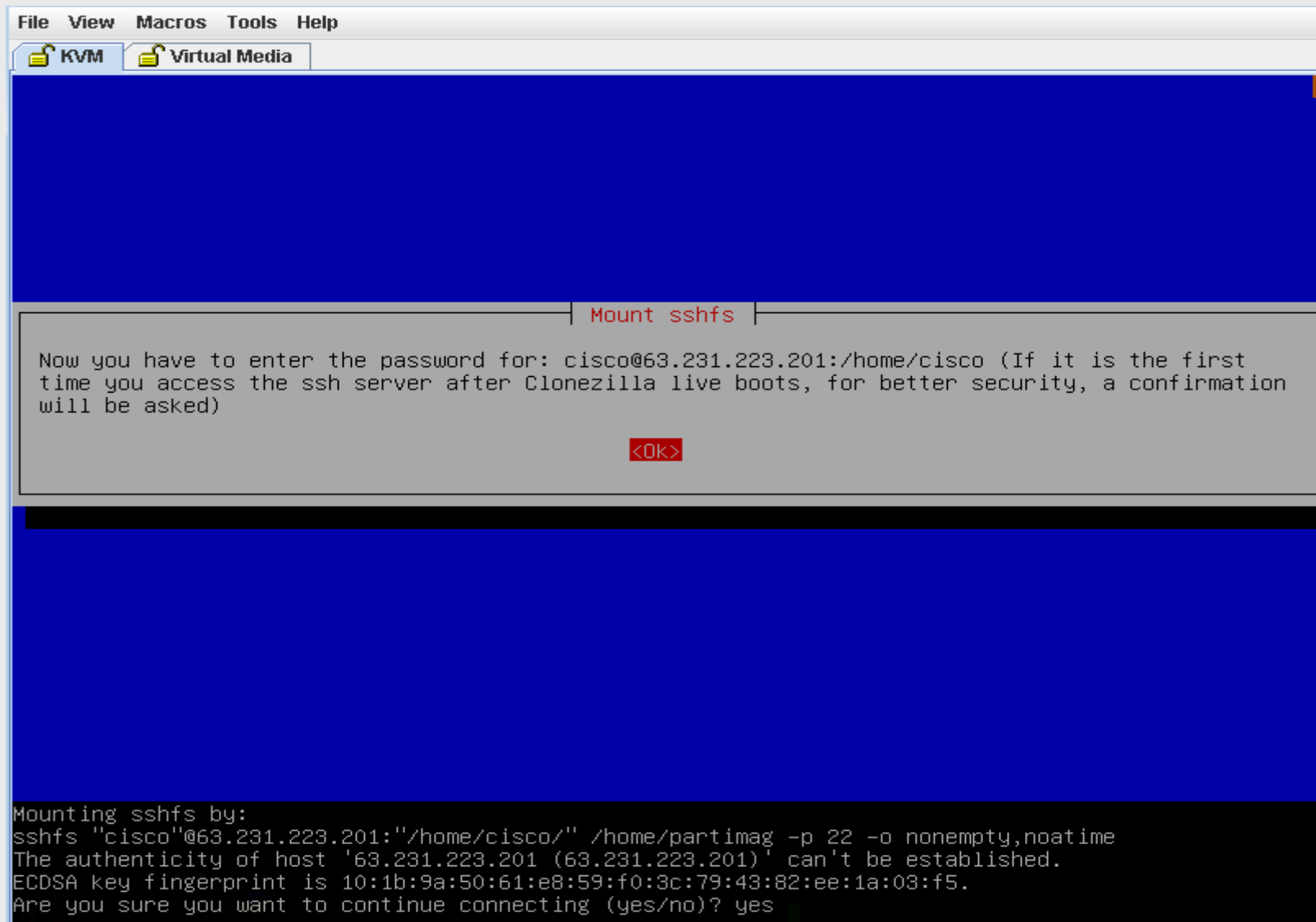
Enter Repository Server User Account



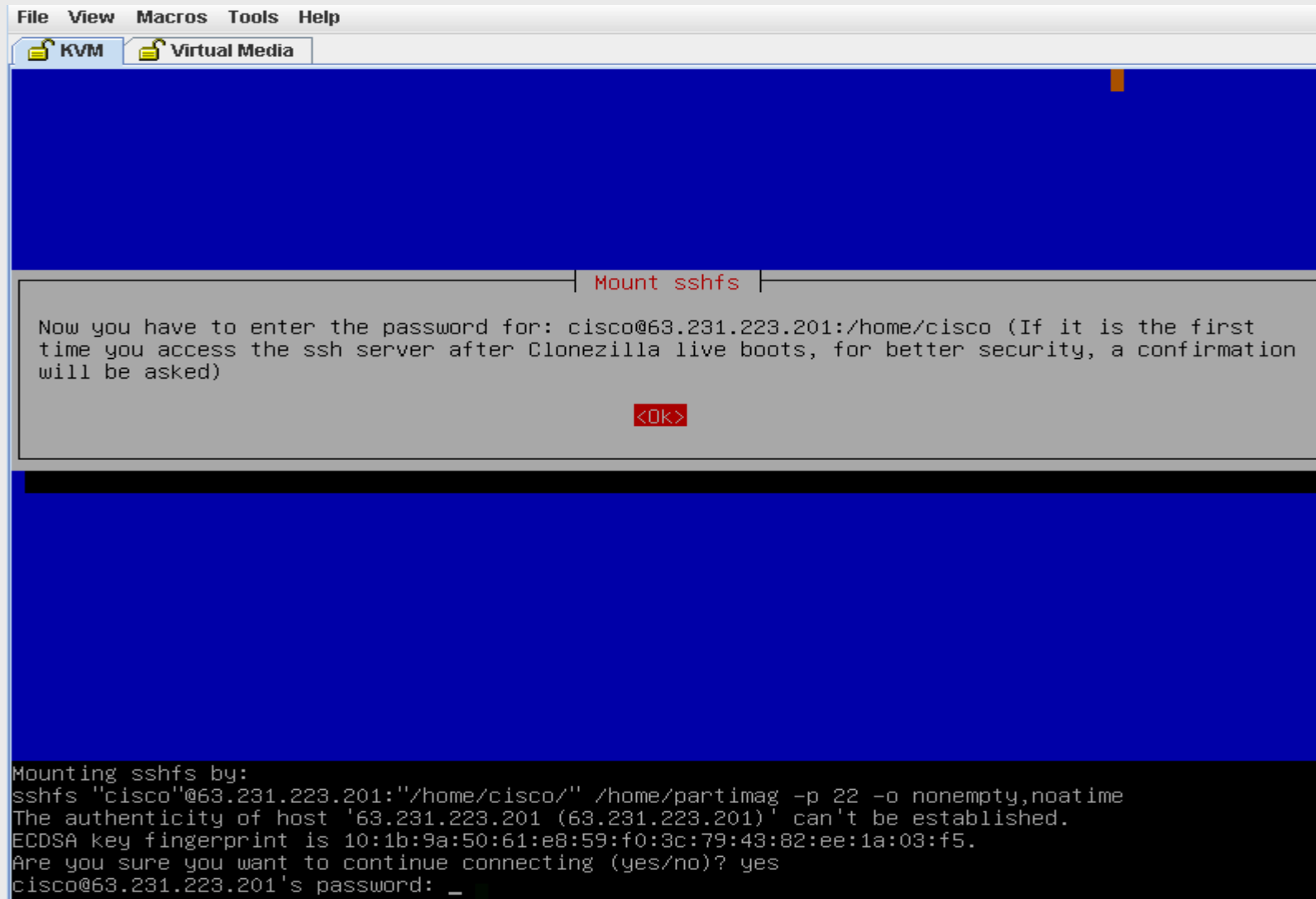
Enter Absolute Path to the image directory on the Repository Server



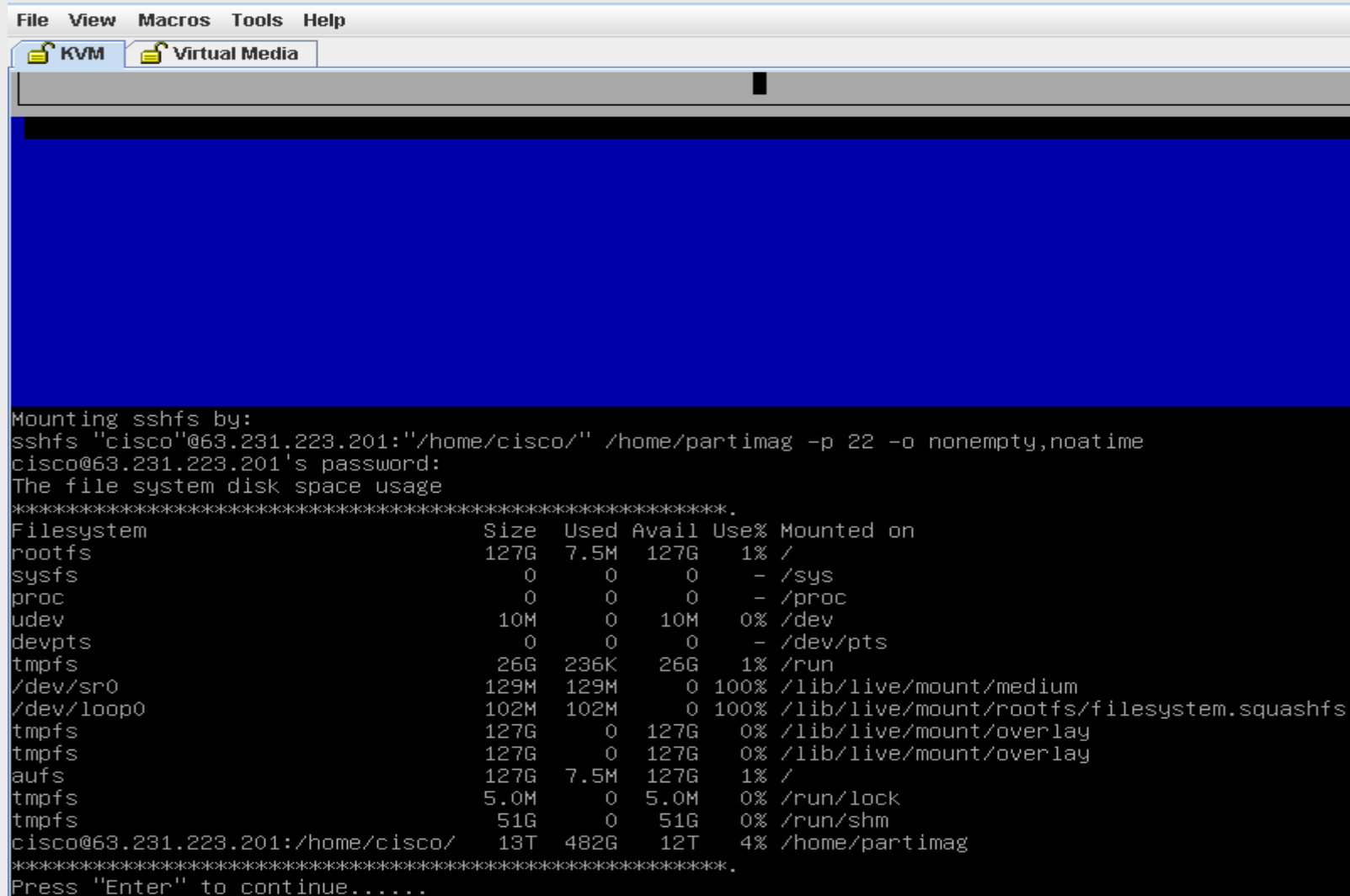
Enter Repository Server User Password



Enter Repository Server User Password Cont.



Enter Repository Server User Password Cont.

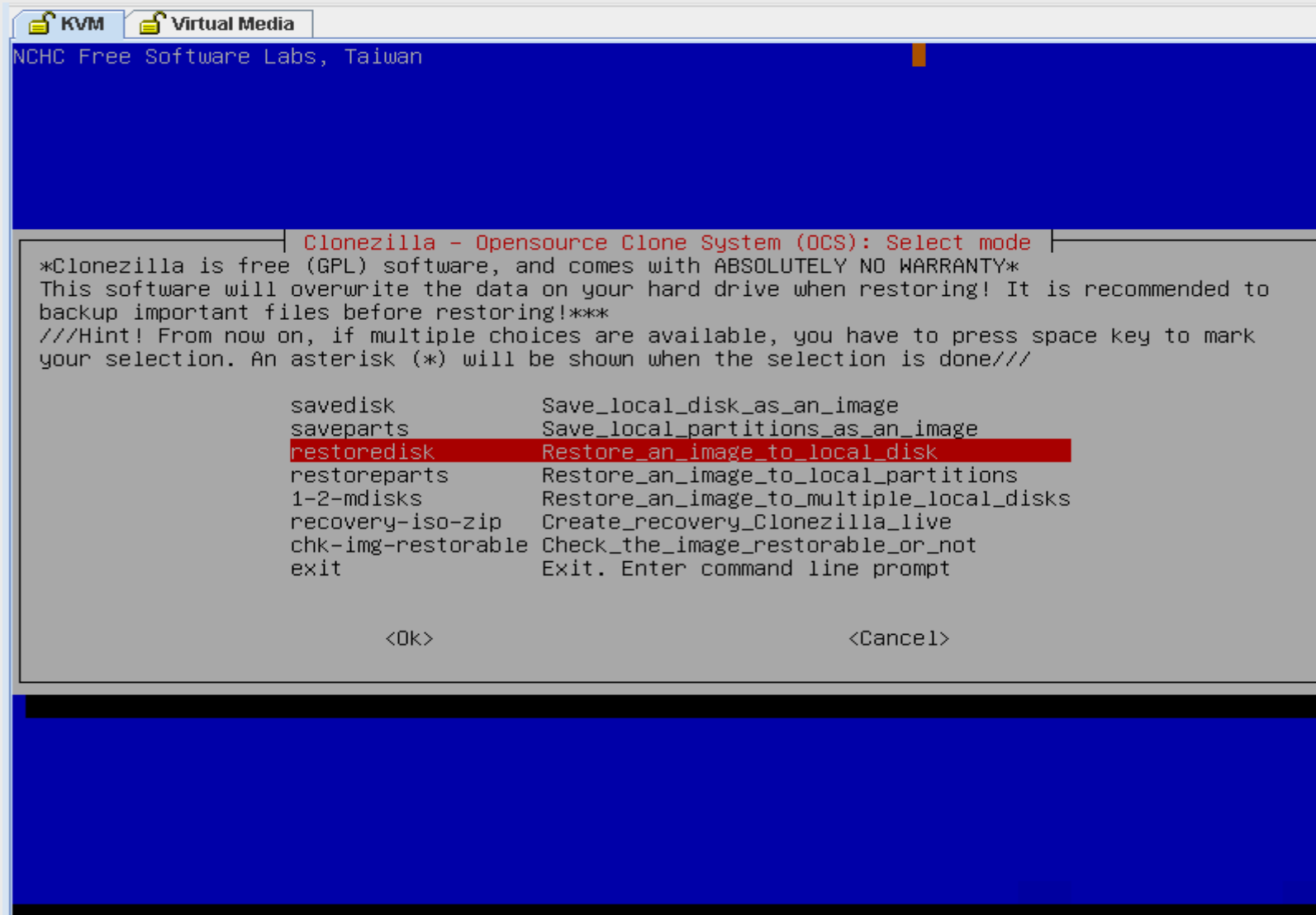


The screenshot shows a KVM virtual machine window with a terminal running. The terminal output displays the command to mount an sshfs, the password prompt, and a detailed file system disk space usage report. The report lists various file systems, their sizes, used space, available space, and usage percentage, along with the mount point for each.

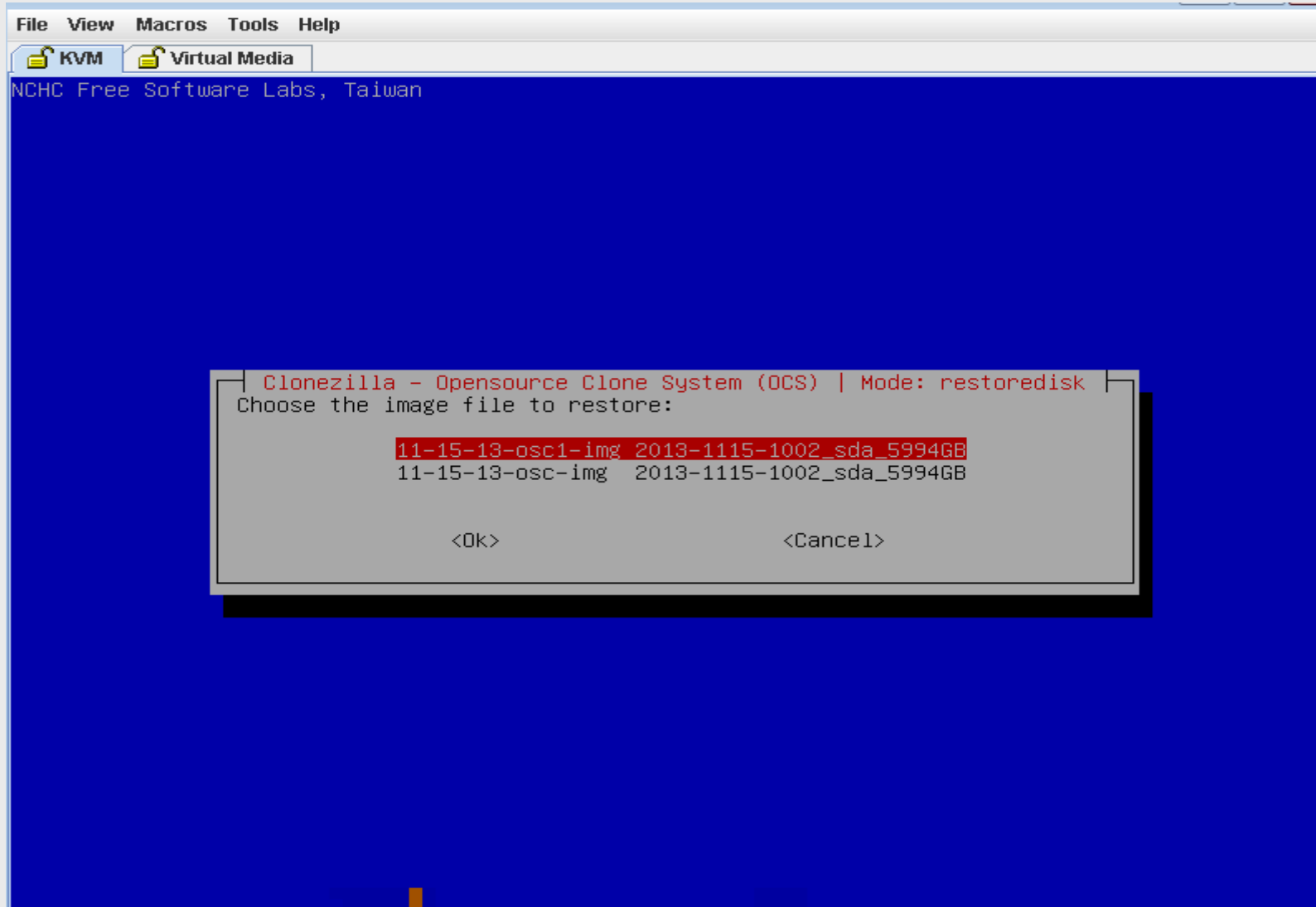
```
File View Macros Tools Help
KVM Virtual Media

Mounting sshfs by:
sshfs "cisco"@63.231.223.201:"/home/cisco/" /home/partimag -p 22 -o nonempty,noatime
cisco@63.231.223.201's password:
The file system disk space usage
*****.
Filesystem                Size      Used Avail Use% Mounted on
rootfs                    127G      7.5M  127G   1% /
sysfs                      0          0      0   - /sys
proc                      0          0      0   - /proc
udev                     10M          0   10M   0% /dev
devpts                     0          0      0   - /dev/pts
tmpfs                     26G      236K    26G   1% /run
/dev/sr0                  129M      129M      0 100% /lib/live/mount/medium
/dev/loop0                102M      102M      0 100% /lib/live/mount/rootfs/filesystem.squashfs
tmpfs                     127G          0   127G   0% /lib/live/mount/overlay
tmpfs                     127G          0   127G   0% /lib/live/mount/overlay
aufs                     127G      7.5M  127G   1% /
tmpfs                     5.0M          0   5.0M   0% /run/lock
tmpfs                     51G          0   51G   0% /run/shm
cisco@63.231.223.201:/home/cisco/ 13T    482G   12T   4% /home/partimag
*****.
Press "Enter" to continue.....
```

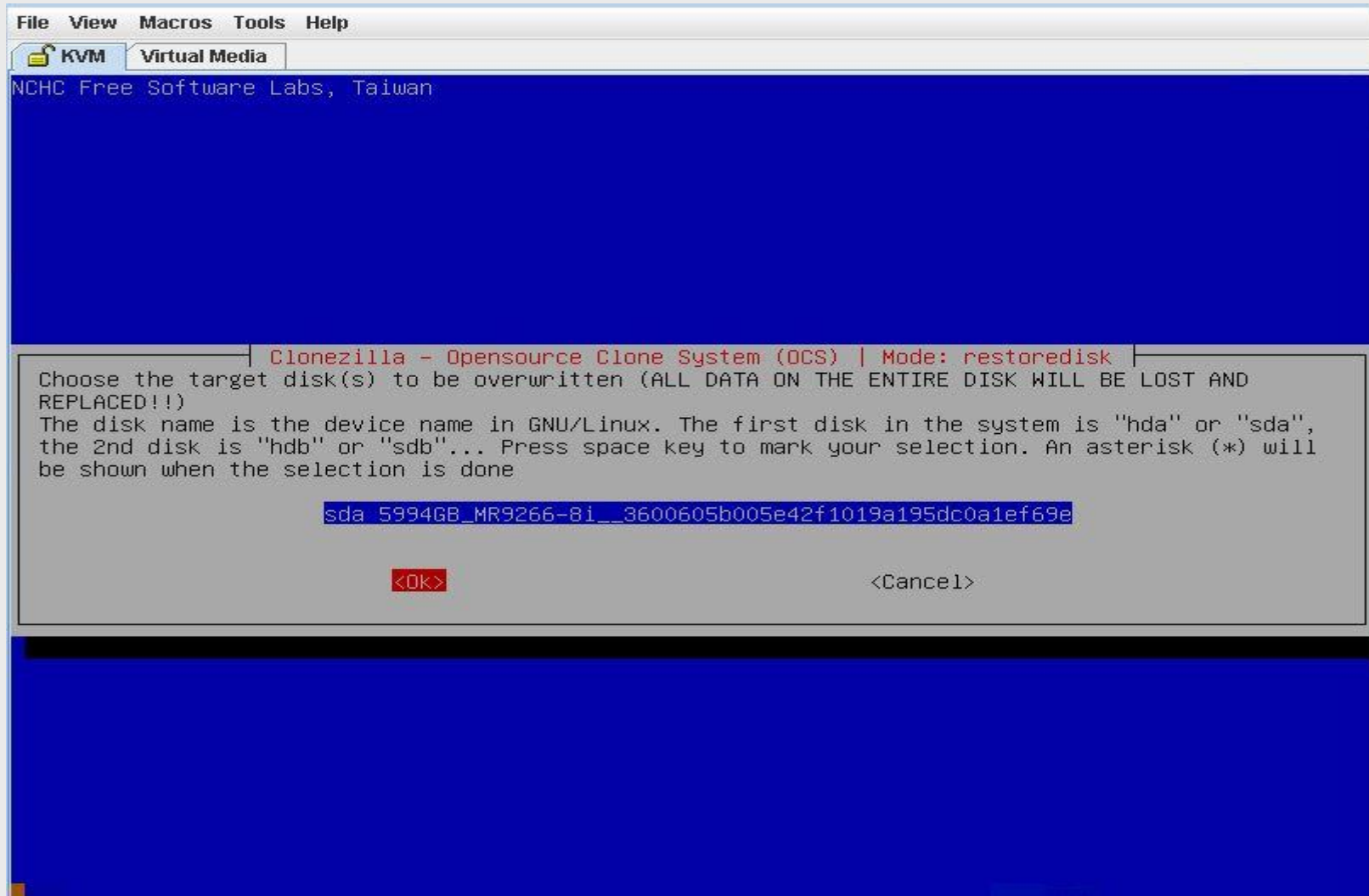
Select Clonezilla Mode – Restore Disk



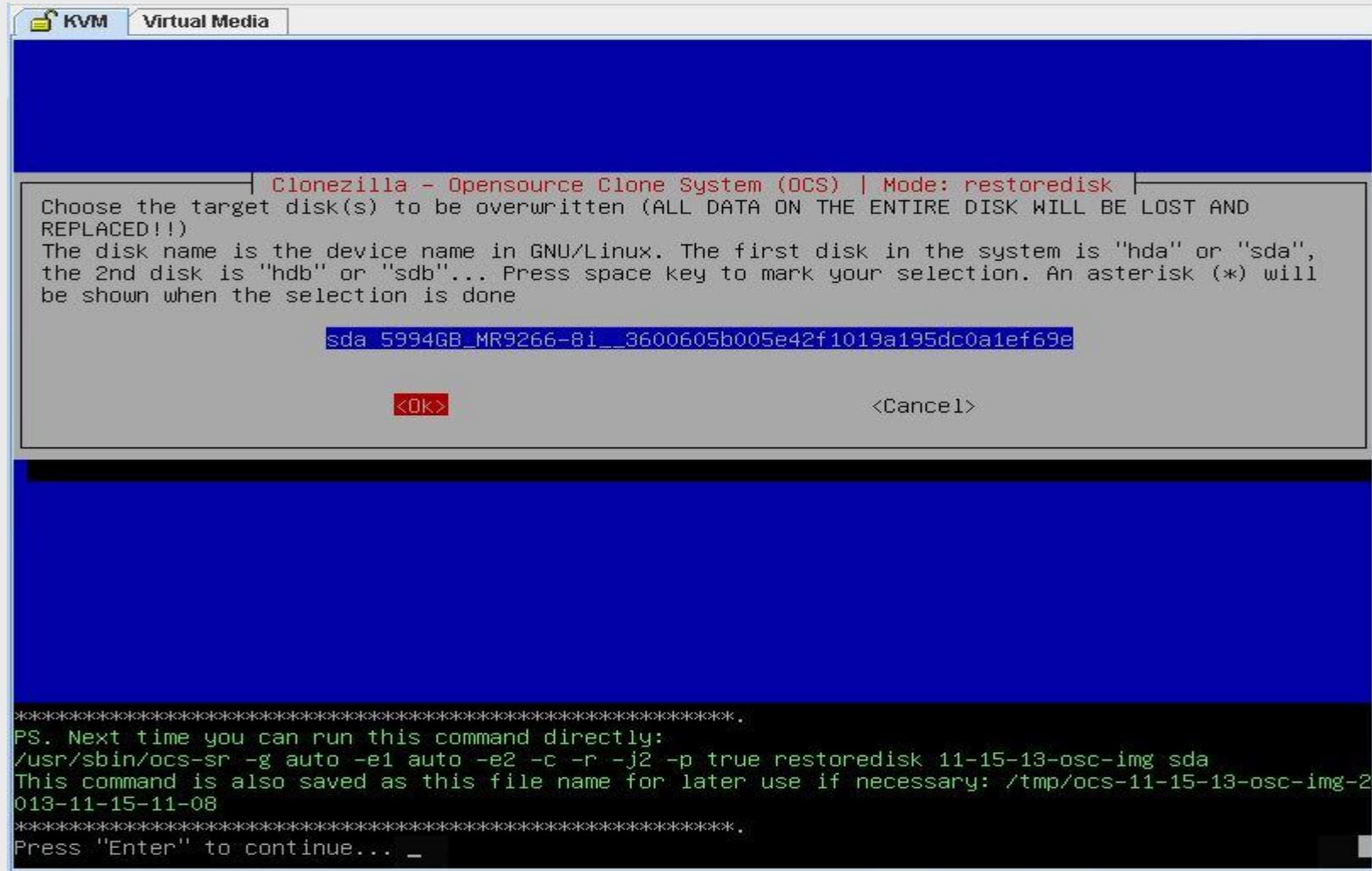
Restore Disk – Select Image : ucs05-build- img/ucs34-control-img/ucs05-compute-img



Restore Disk



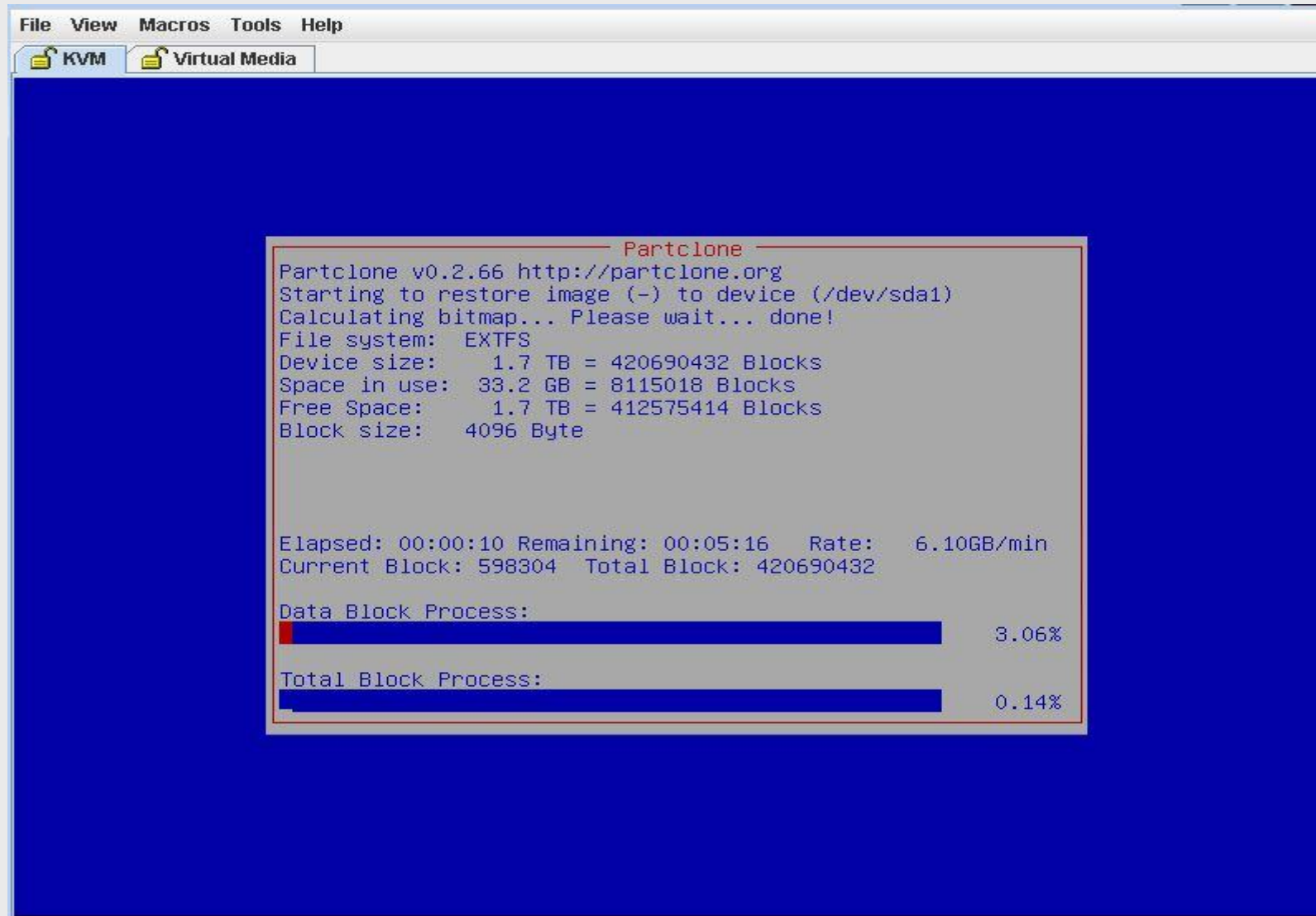
Ex. Restore Disk



Ex. Restore Disk Cont.

```
KVM Virtual Media
WARNING!!! WARNING!!! WARNING!!!
WARNING! THE EXISTING DATA IN THIS HARDDISK/PARTITION(S) WILL BE OVERWRITTEN! ALL EXISTING DATA WILL
BE LOST:
*****.
Machine: UCSC-C240-M3S
sda (5994GB_MR9266-8i__3600605b005e42f1019a195dc0a1ef69e)
sda1 (1.6T_boot(In_MR9266-8i_)_3600605b005e42f1019a195dc0a1ef69e)
*****.
Let me ask you again. Are you sure you want to continue?
[y/n] y
OK, let's do it!!
Shutting down the Logical Volume Manager
  No volume groups found
Finished Shutting down the Logical Volume Manager
Creating partition in /dev/sda...
Trying to clean the MBR and GPT partition table on the destination disk first: /dev/sda
[ 2850.893544] sda: sda1 sda2 < sda5 >
Informing kernel the partition table has changed...
Informing kernel the file system has been changed.....[ 2853.997744] sda: unknown partition table
. done!
[ 2855.110776] SQUASHFS error: Unable to read data cache entry [280d272]
[ 2855.154283] SQUASHFS error: Unable to read page, block 280d272, size 50394
strings: error while loading shared libraries: /usr/lib/libbfd-2.23.90-system.20131017.so: cannot re
ad file data: Input/output error
Non-grub boot loader found on /home/partimag/11-15-13-osc-img/sda-mbr...
The CHS value of hard drive from EDD will be used for sfdisk.
No CHS value was found from EDD info for disk /dev/sda.
*****.
Fri Nov 15 11:09:19 UTC 2013
Writing the partition table...
No partition table exists in target disk /dev/sda, try to initialize one so that we can get the disk
size by parted... Running: parted -s /dev/sda mklabel msdos
done!
Error! Destination disk (/dev/sda) size is 5.99TB, which is larger than the MBR partition table ent
ry maximum 2 TiB (~ 2.2 TB). You have to use GUID partition table format (GPT).
Program terminated!!
Press "Enter" to continue...[.]..
```

Ex. Restore Disk Cont.



Change the boot order to HDD

The screenshot displays the Cisco Integrated Management Controller (IMC) interface. The top header shows the Cisco logo and the title "Cisco Integrated Management Controller". On the left, a sidebar contains navigation links: "Overall Server Status" (with a green checkmark and "Good" status), "Server" (selected), "Admin", "Summary", "Inventory", "Sensors", "System Event Log", "Remote Presence", "BIOS" (highlighted in blue), "Power Policies", and "Fault Summary". The main content area is titled "BIOS" and includes a toolbar with icons for refresh, up, down, keyboard, help, and info. Below the toolbar, there are two sections: "Actions" and "BIOS Properties". The "Actions" section contains four links: "Configure BIOS", "Configure Boot Order" (highlighted in blue), "Recover Corrupt BIOS", and "Clear BIOS CMOS". The "BIOS Properties" section shows the "Running Version: C200.1.4.3c.0 (Build Date: 02/29/2012)". Below this, the "Boot Order" section is divided into "Configured Boot Order" and "Actual Boot Order". The "Configured Boot Order" lists: 1. CDROM, 2. HDD (highlighted in blue), and 3. PXE. The "Actual Boot Order" lists: + CD/DVD, + HDD, + Network Device (PXE), + FDD, and Internal EFI Shell. A modal dialog titled "Configure Boot Order" is open in the foreground. It has two columns: "Device Types" and "Boot Order". The "Device Types" column lists "FDD" and "EFI". The "Boot Order" column lists "HDD" (highlighted in blue), "CDROM", and "PXE". Between the columns are "Add >" and "< Remove" buttons. To the right of the "Boot Order" list are "Up" and "Down" buttons. At the bottom of the dialog are "Apply" and "Cancel" buttons.

Overall Server Status
Good

Server | Admin

Summary
Inventory
Sensors
System Event Log
Remote Presence
BIOS
Power Policies
Fault Summary

BIOS

Actions

- Configure BIOS
- Configure Boot Order
- Recover Corrupt BIOS
- Clear BIOS CMOS

BIOS Properties
Running Version: C200.1.4.3c.0 (Build Date: 02/29/2012)

Boot Order

Configured Boot Order

- CDROM
- HDD
- PXE

Actual Boot Order

- + CD/DVD
- + HDD
- + Network Device (PXE)
- + FDD
- Internal EFI Shell

Configure Boot Order

Device Types:

- FDD
- EFI

Boot Order:

- HDD
- CDROM
- PXE

Add > < Remove Up Down

Apply Cancel

Ex. Restore Disk Completed - Reboot

```
File View Macros Tools Help
KVM Virtual Media

Found boot loader grub in the MBR of disk /dev/sda.
Found grub 2 installed in the restored OS.
Test if we can chroot the restored OS partition /dev/sda1...
Yes, we are able to chroot the restored OS partition /dev/sda1.
Trying to use the grub2 in the restored OS...
Running: run_grub2_from_restored_os "/dev/sda1" "/dev/sda1" "/dev/sda"
Re-installing grub2 on disk /dev/sda with grub2 dir in partition /dev/sda1 and root partition /dev/sda1... [ 522.854108] EXT4-fs (sda1): mounted filesystem with ordered data mode. Opts: (null)

Installation finished. No error reported.
done!
*****
The NTFS boot partition was not found or not among the restored partition(s). Skip running partclone.ntfsfixboot.
*****
End of restoreparts job for image 11-15-13-osc-img.
End of restoredisk job for image 11-15-13-osc-img.
*****
Checking if udevd rules have to be restored...
This program is not started by Clonezilla server, so skip notifying it the job is done.
Finished!
Now syncing - flush filesystem buffers...

Ending /usr/sbin/ocs-sr at 2013-11-15 11:26:45 UTC...
*****
If you want to use Clonezilla again:
(1) Stay in this console (console 1), enter command line prompt
(2) Run command "exit" or "logout"
*****
When everything is done, remember to use 'poweroff', 'reboot' or follow the menu to do a normal poweroff/reboot procedure. Otherwise if the boot media you are using is a writable device (such as USB flash drive), and it's mounted, poweroff/reboot in abnormal procedure might make it FAIL to boot next time!
*****
Press "Enter" to continue..._
```