Quick Guide to Clonezilla

Date: April 10, 2014

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

Access KVM Console

Change the boot order to CDROM

Select Clonezilla ISO – Add Image
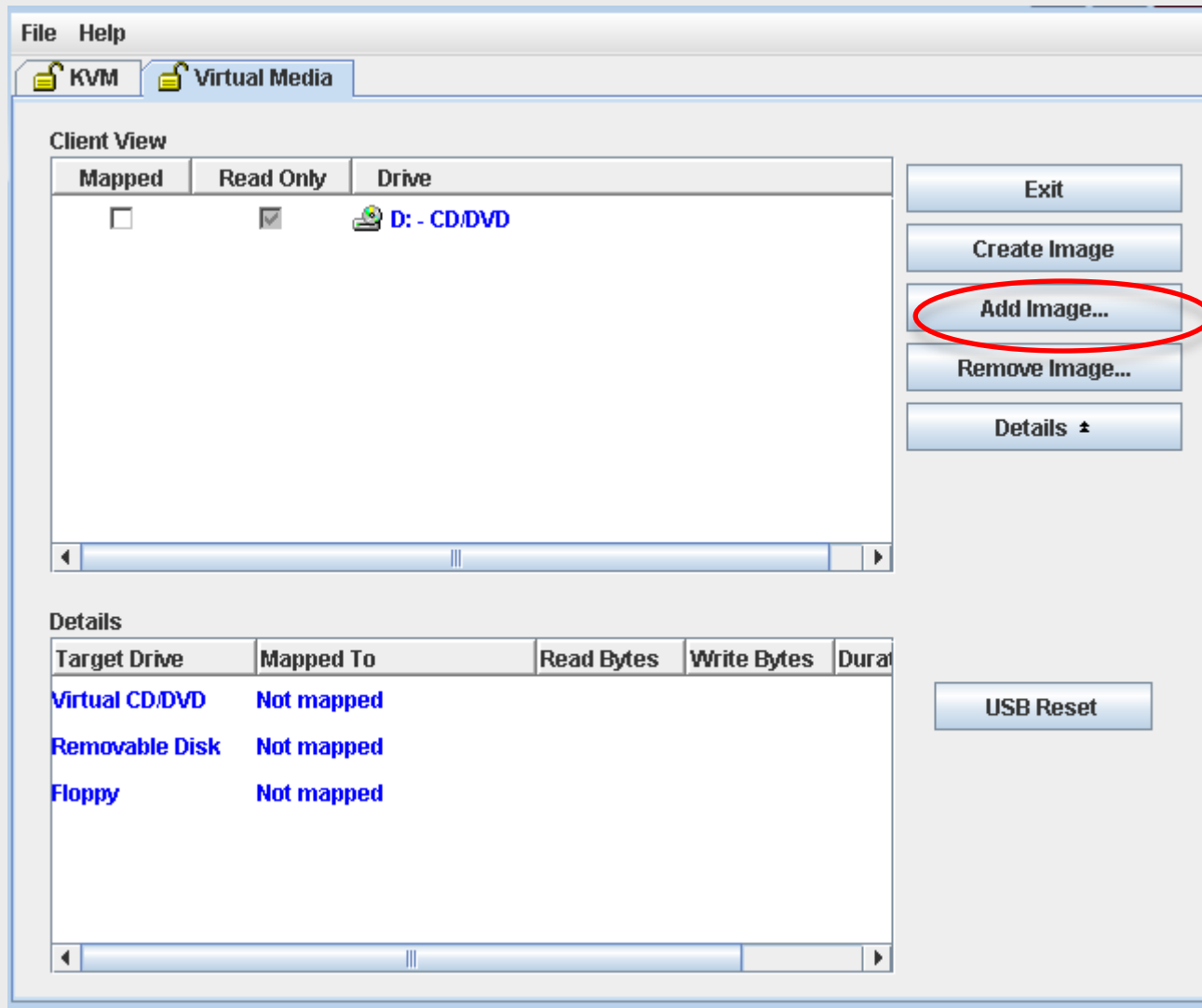
Select Clonezilla ISO
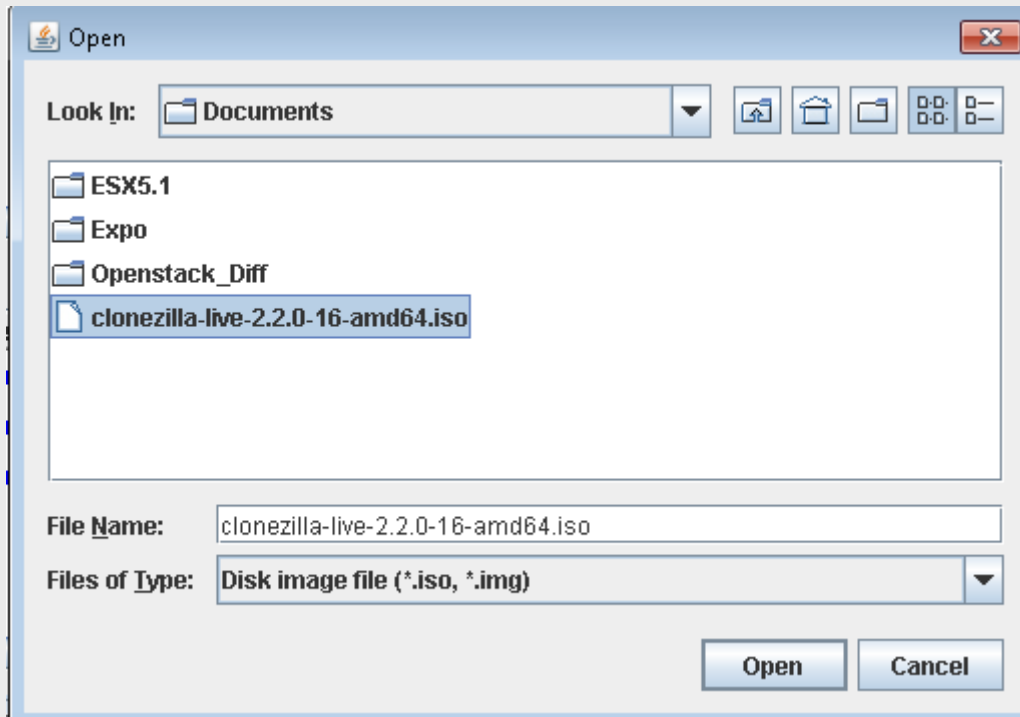
Select Clonezilla ISO – Map ISO to vDVD

Power cycle server

Boot Clonezilla ISO

Select Language
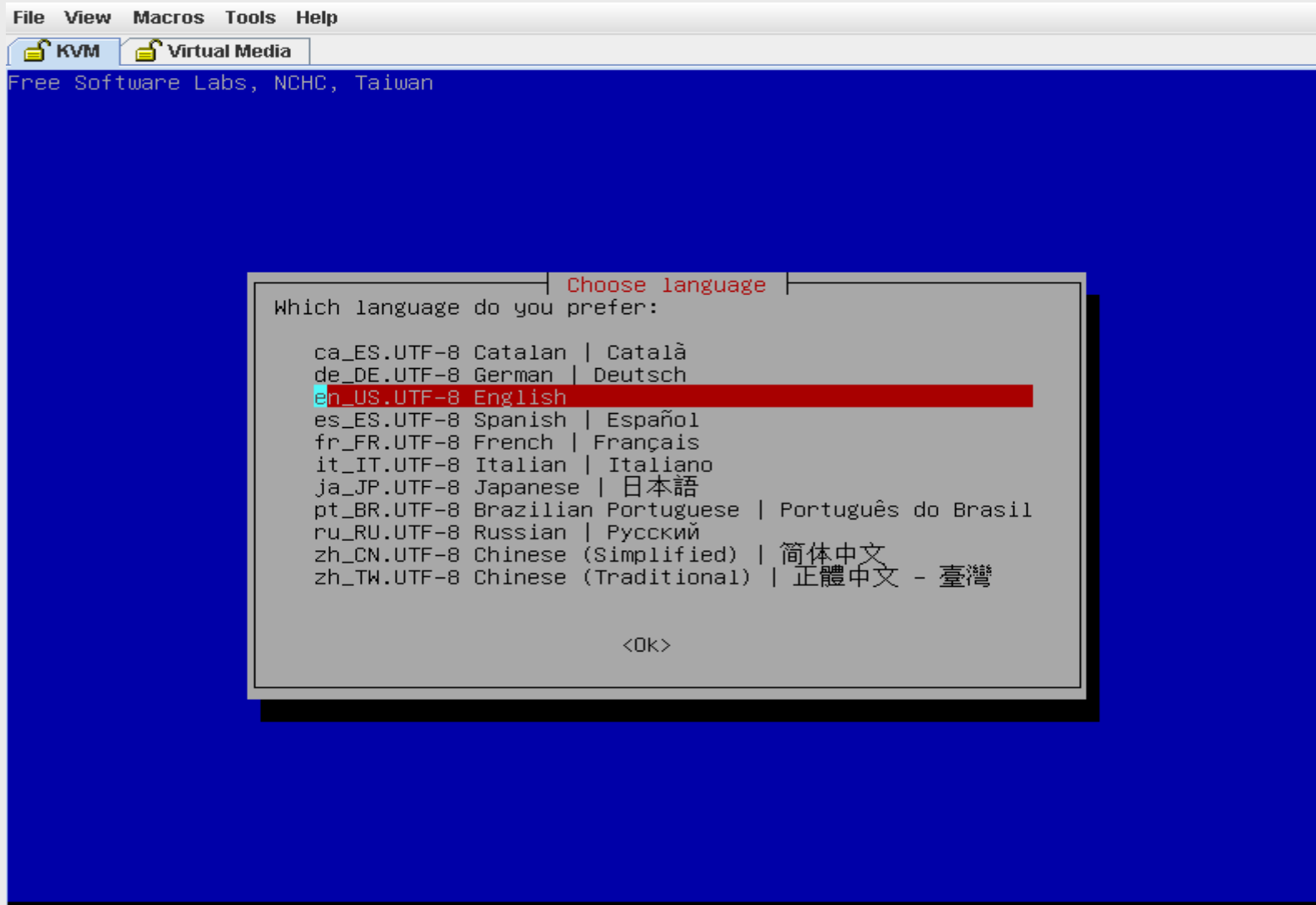
Select Keyboard Mapping

File   View   Macros   Tools   Help

KVM   Virtual Media

Package configuration

Configuring console-data

The keymap records the layout of symbols on the keyboard.

- 'Select keymap from arch list': select one of the predefined keymaps
  specific for your architecture (recommended for non-USB keyboards);
- 'Don't touch keymap': don't overwrite the keymap in /etc/console,
  which is maintained manually with install-keymap(8);
- 'Keep kernel keymap': prevent any keymap from being loaded next time
  the system boots;
- 'Select keymap from full list': list all the predefined keymaps.
  Recommended when using cross-architecture (often USB) keyboards.

Policy for handling keymaps:

```
              Select keymap from arch list
              Don't touch keymap
              Keep kernel keymap
              Select keymap from full list


        <Ok>                          <Cancel>
```

Start Clonezilla

Select device-image
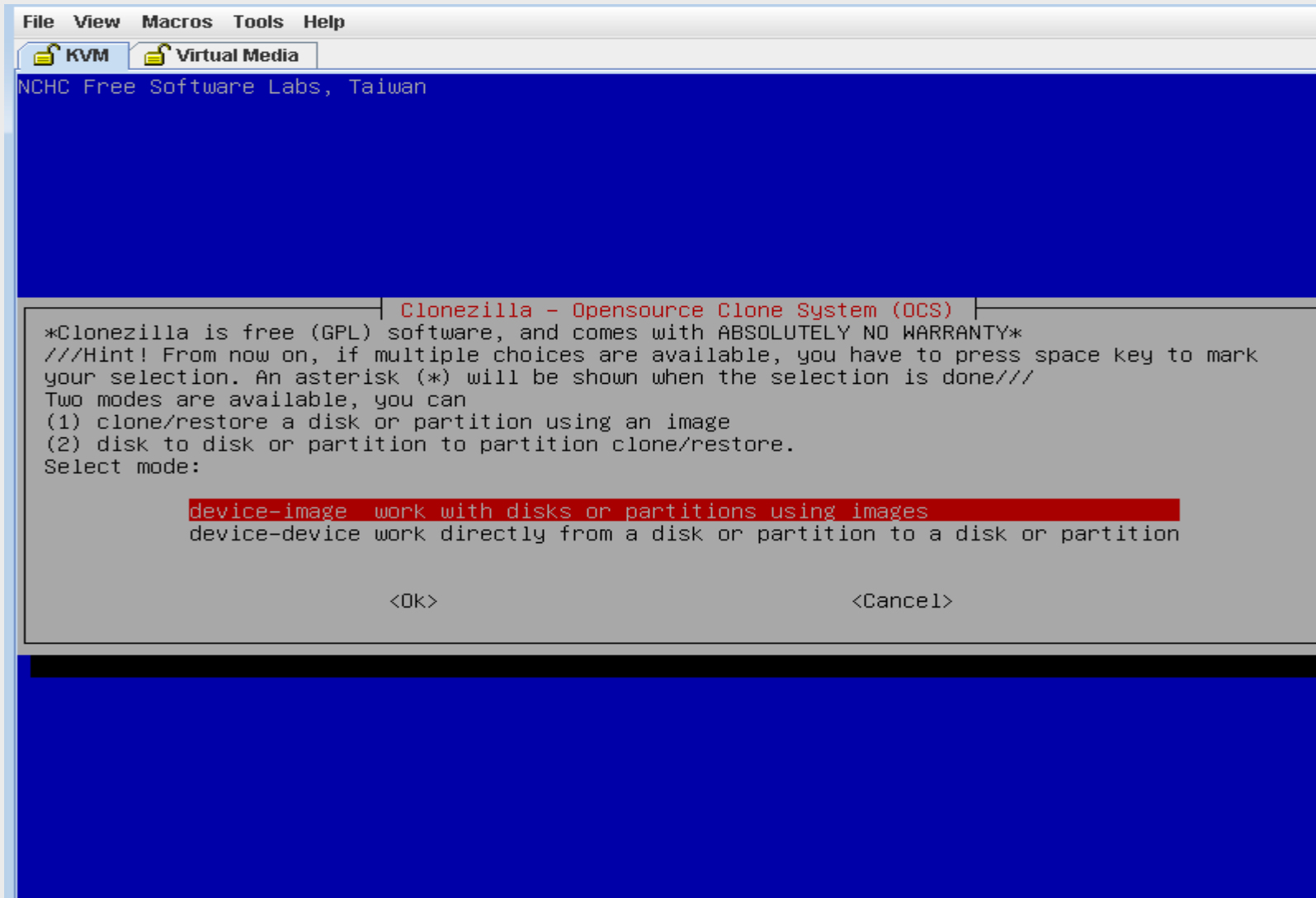
Select Image Repository - SSH Server
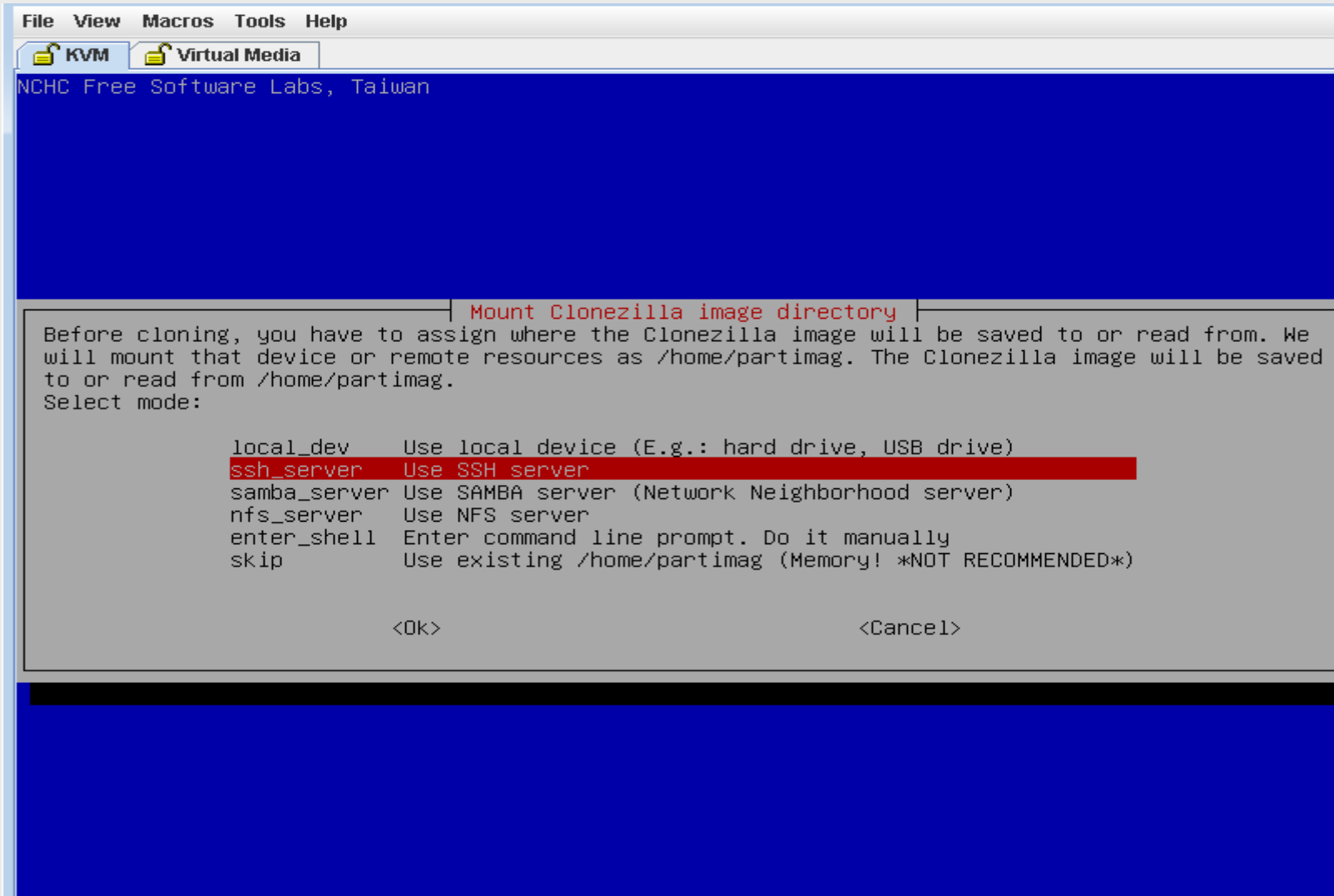
Select Ethernet0 Interface – lowest MAC address


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File  View  Macros  Tools  Help

 KVM     Virtual Media

Which network device you want to configure ?

 eth0 Link_detected:no(NetXtreme_II_BCM57712_10_..|00:10:18:eb:53:b4)
 eth1 Link_detected:no(NetXtreme_II_BCM57712_10_..|00:10:18:eb:53:b6)
 eth2 Link_detected:yes(I350_Gigabit_Network_Conn..|7c:ad:74:6e:cb:e2)
 eth3 Link_detected:yes(I350_Gigabit_Network_Conn..|7c:ad:74:6e:cb:e3)
 eth4 Link_detected:yes(I350_Gigabit_Network_Conn..|7c:ad:74:6e:cb:e4)
 eth5 Link_detected:no(I350_Gigabit_Network_Conn..|7c:ad:74:6e:cb:e5)



            <Ok>                        <Cancel>
```

Assign Static IP

Enter Static IP
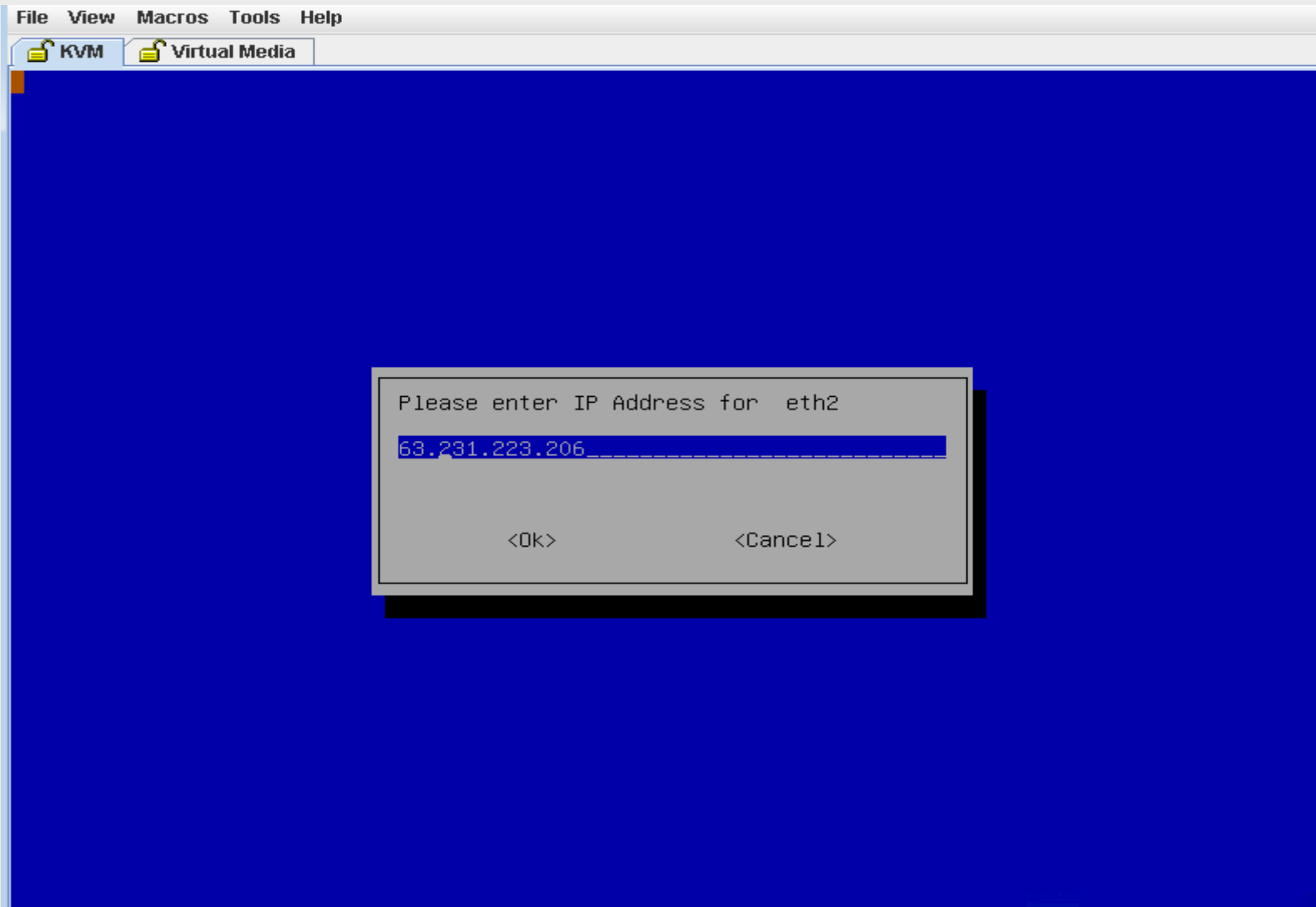
Enter Static IP Mask
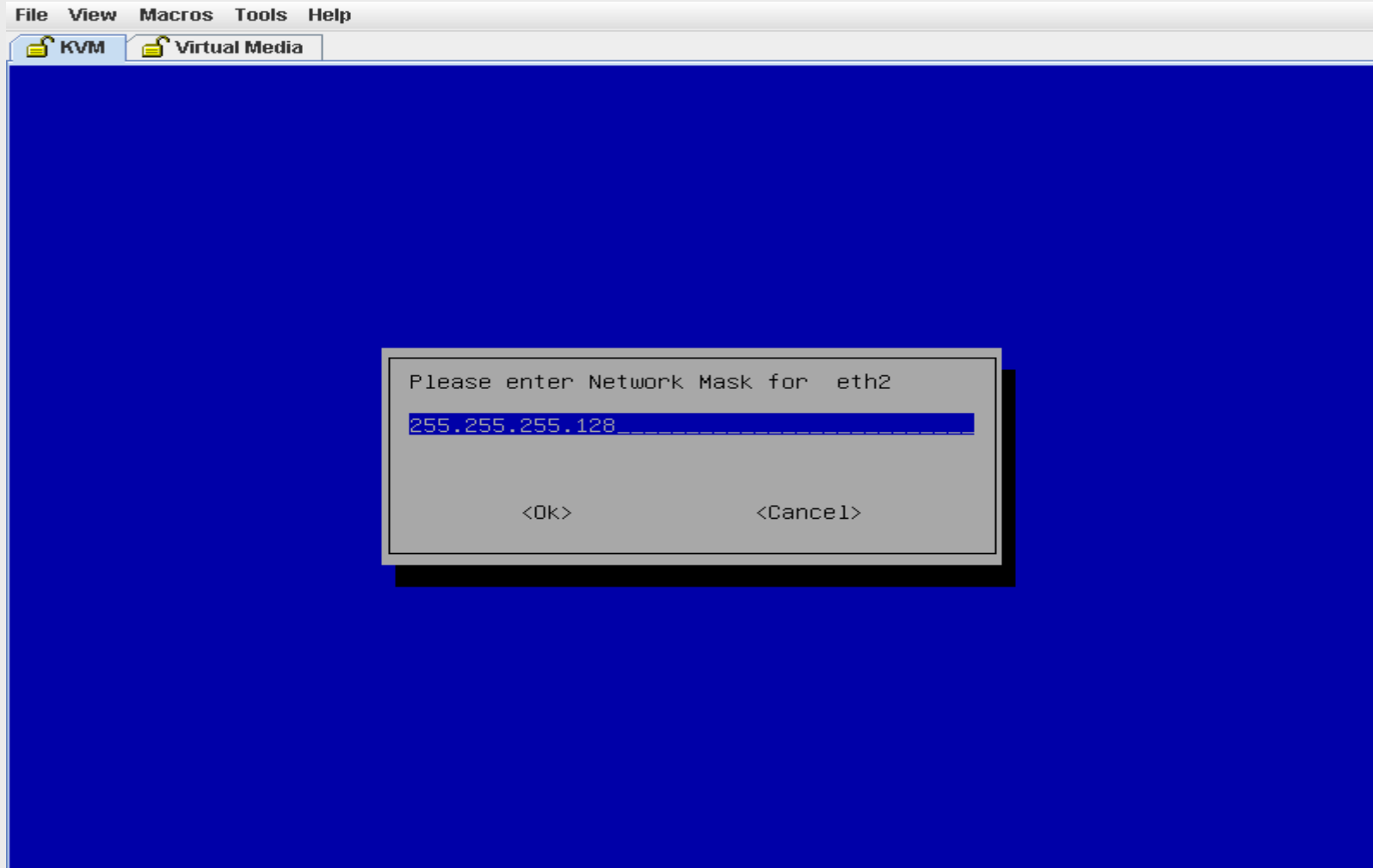
Static IP Default Gateway

File   View   Macros   Tools   Help

KVM   Virtual Media

Please enter Default Gateway

63.231.223.129_____

<Ok>   <Cancel>
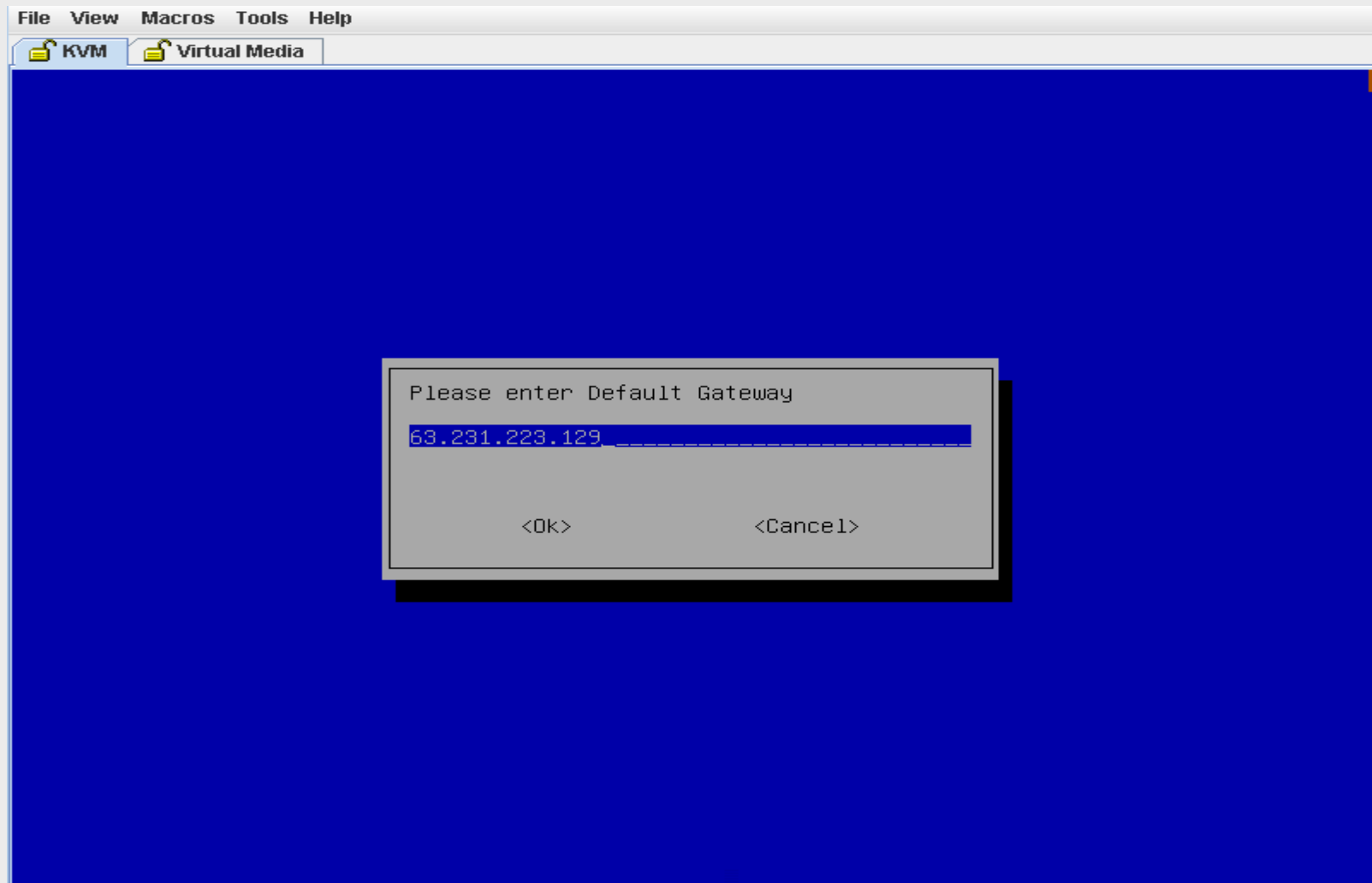
Static IP DNS
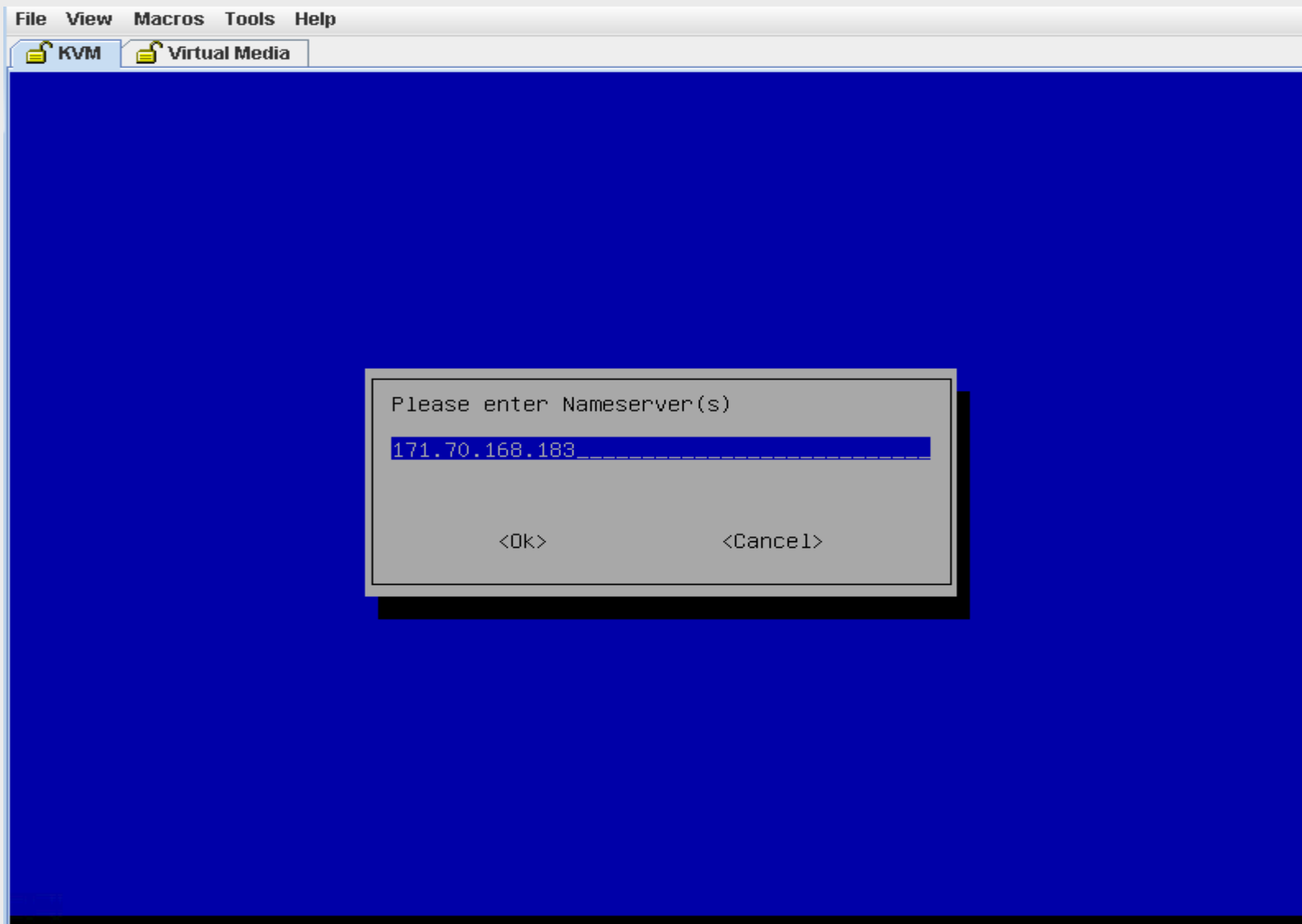
Enter Repository Server IP
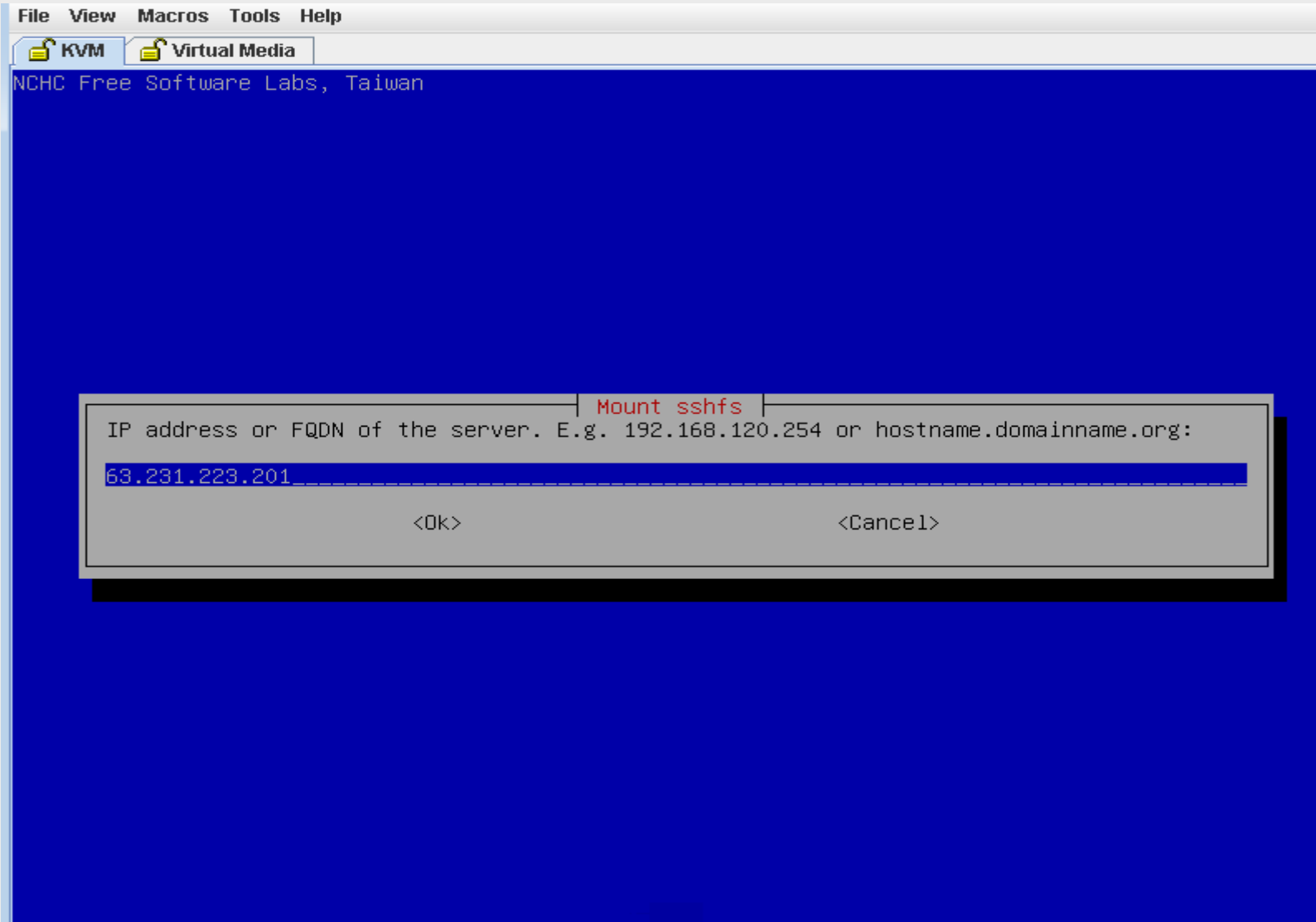
Enter Repository Server SSH Port Number
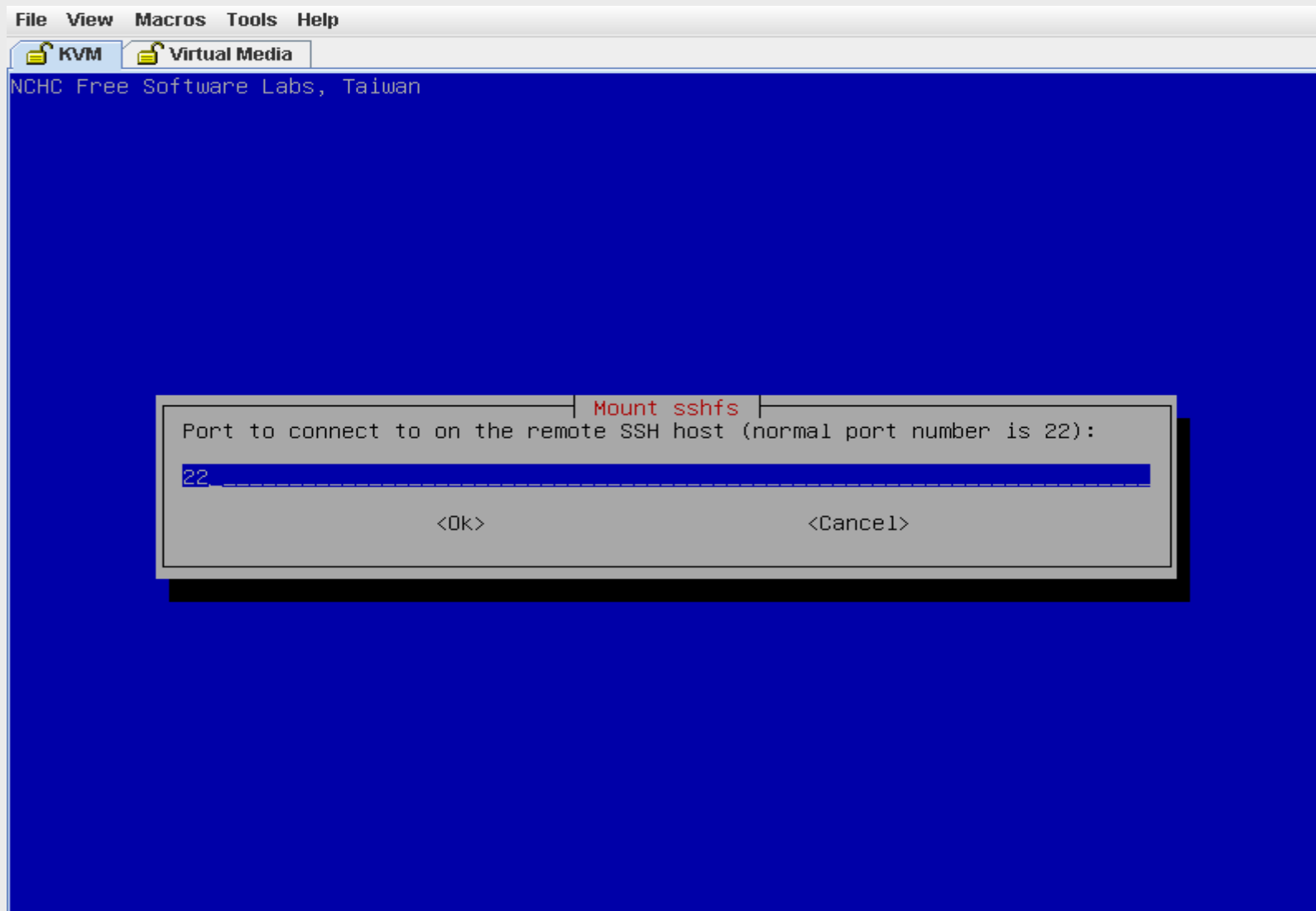
Enter Repository Server User Account
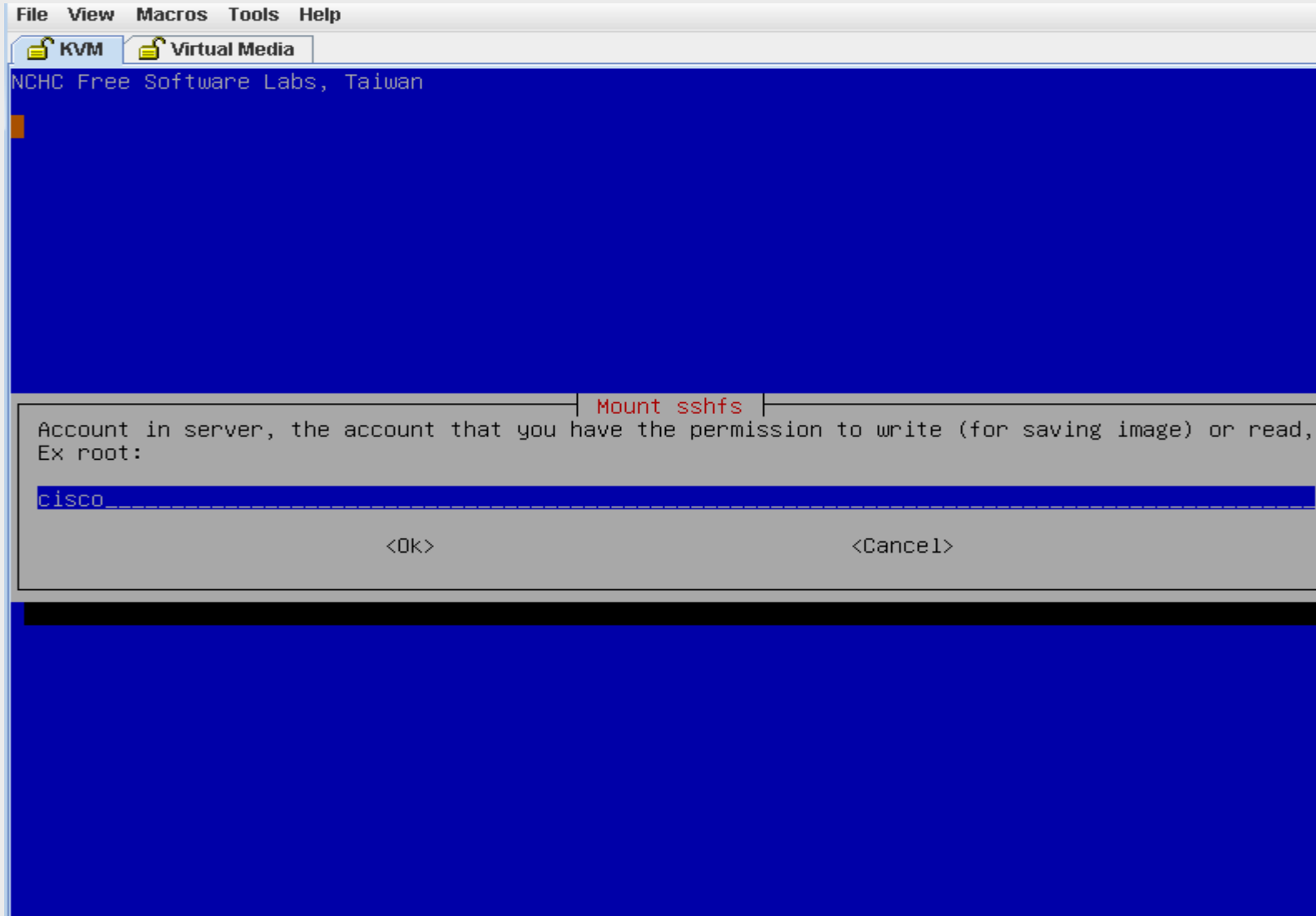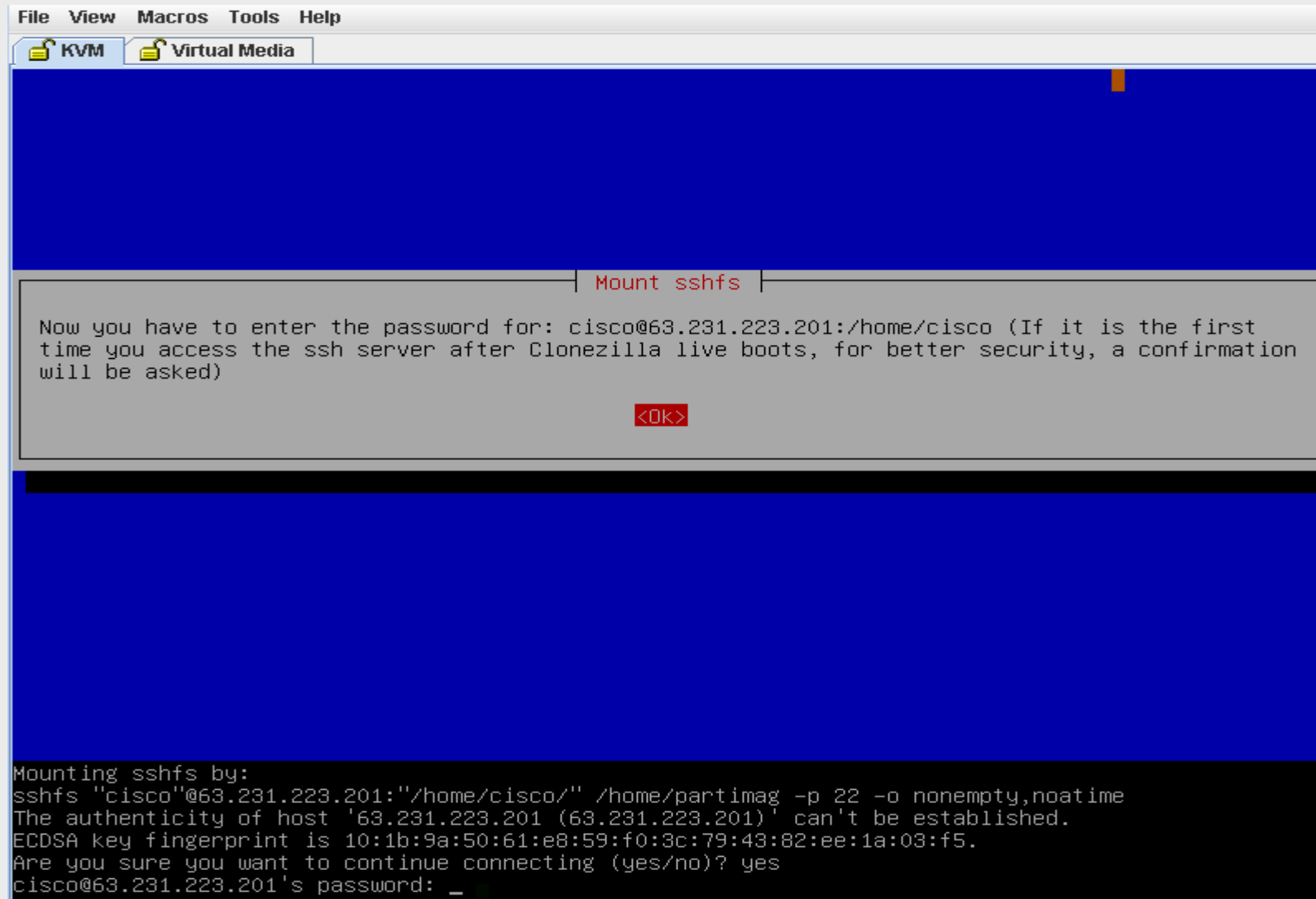
Enter Absolute Path to the image directory on the Repository Server
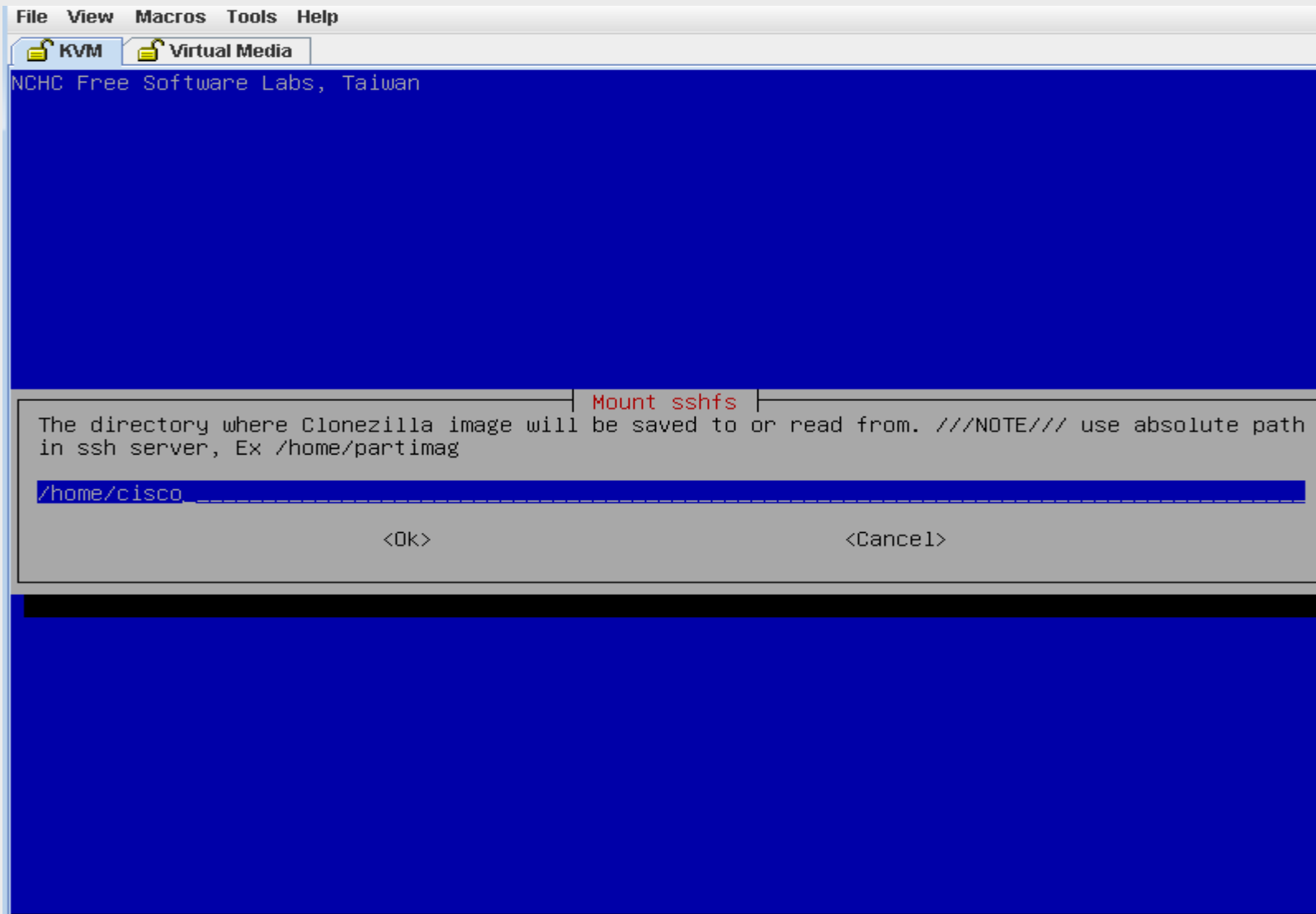
Enter Repository Server User Password
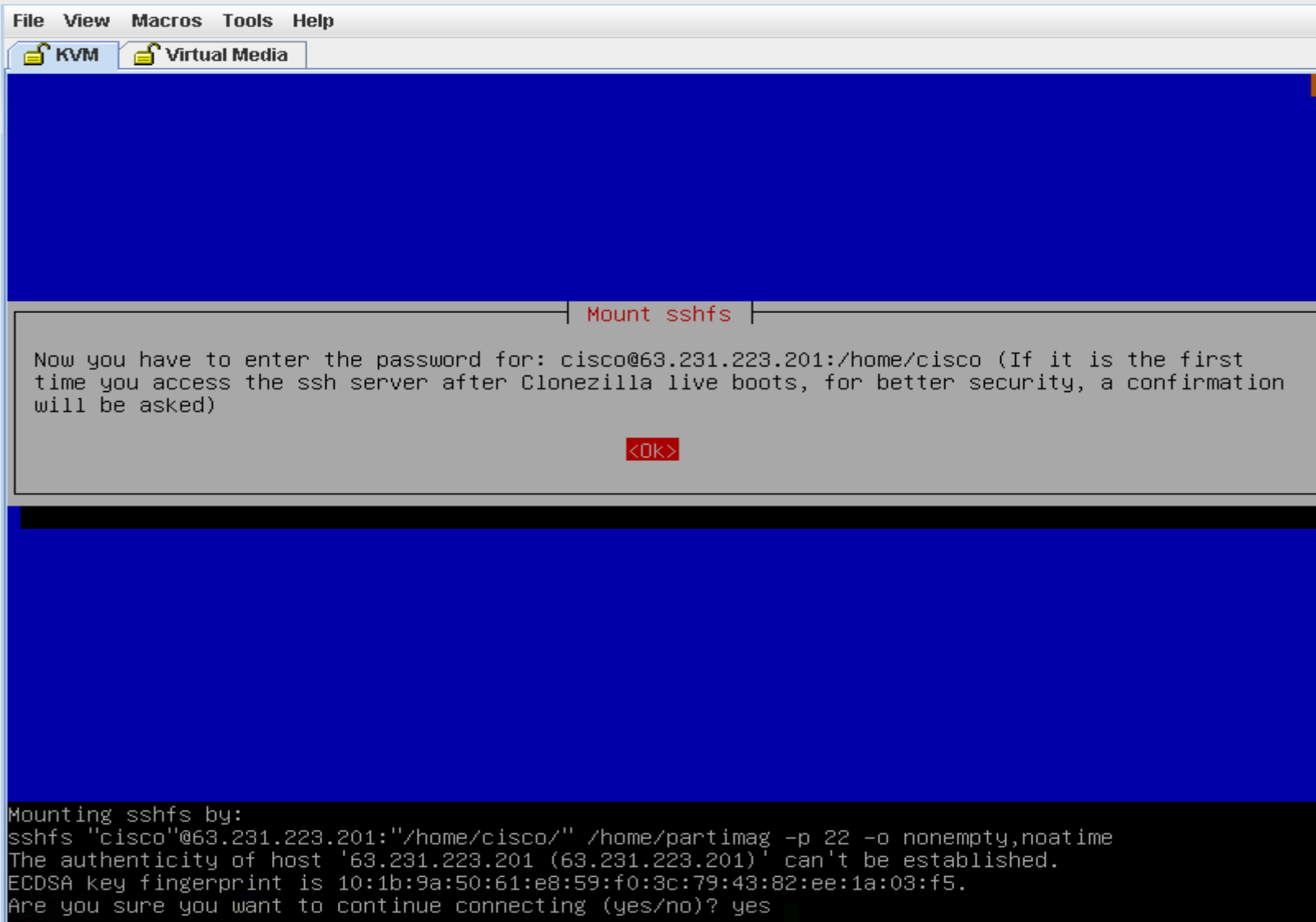
File   View   Macros   Tools   Help

KVM   Virtual Media

```
┤ Mount sshfs ├

Now you have to enter the password for: cisco@63.231.223.201:/home/cisco (If it is the first
time you access the ssh server after Clonezilla live boots, for better security, a confirmation
will be asked)

                                    <Ok>
```

```
Mounting sshfs by:
sshfs "cisco"@63.231.223.201:"/home/cisco/" /home/partimag -p 22 -o nonempty,noatime
The authenticity of host '63.231.223.201 (63.231.223.201)' can't be established.
ECDSA key fingerprint is 10:1b:9a:50:61:e8:59:f0:3c:79:43:82:ee:1a:03:f5.
Are you sure you want to continue connecting (yes/no)? yes
```

Enter Repository Server User Password Cont.

Enter Repository Server User Password Cont.

Choose the mode to run wizard.
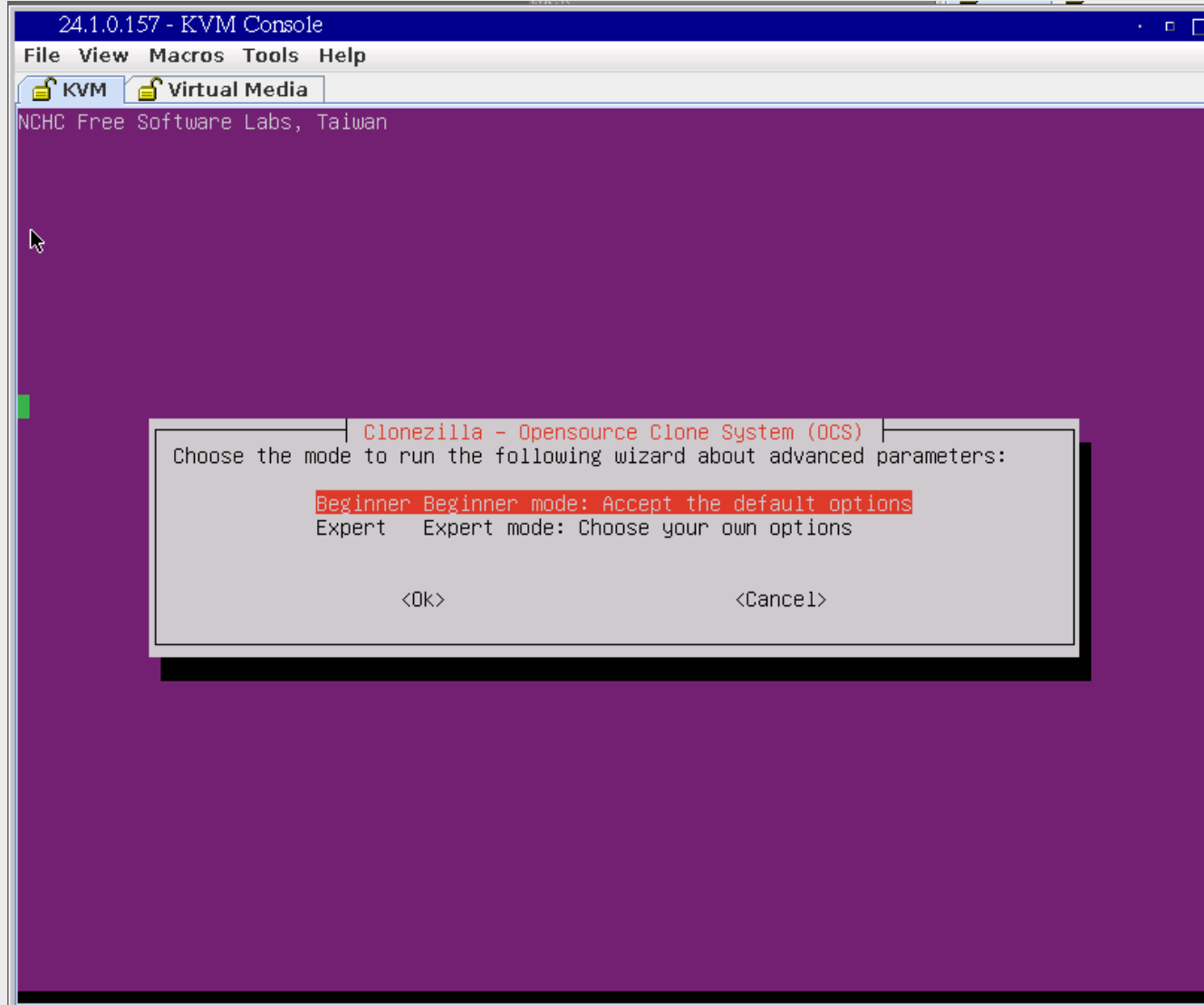
Select Clonezilla Mode – Restore Disk


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KVM    Virtual Media
NCHC Free Software Labs, Taiwan

┌──────── Clonezilla - Opensource Clone System (OCS): Select mode ────────┐
│ *Clonezilla is free (GPL) software, and comes with ABSOLUTELY NO WARRANTY* │
│ This software will overwrite the data on your hard drive when restoring! It is recommended to │
│ backup important files before restoring!*** │
│ ///Hint! From now on, if multiple choices are available, you have to press space key to mark │
│ your selection. An asterisk (*) will be shown when the selection is done/// │
│                                                                          │
│         savedisk            Save_local_disk_as_an_image                  │
│         saveparts           Save_local_partitions_as_an_image            │
│         restoredisk         Restore_an_image_to_local_disk               │
│         restoreparts        Restore_an_image_to_local_partitions         │
│         1-2-mdisks          Restore_an_image_to_multiple_local_disks     │
│         recovery-iso-zip    Create_recovery_Clonezilla_live              │
│         chk-img-restorable  Check_the_image_restorable_or_not            │
│         exit                Exit. Enter command line prompt              │
│                                                                          │
│                                                                          │
│              <Ok>                              <Cancel>                  │
└──────────────────────────────────────────────────────────────────────────┘
```
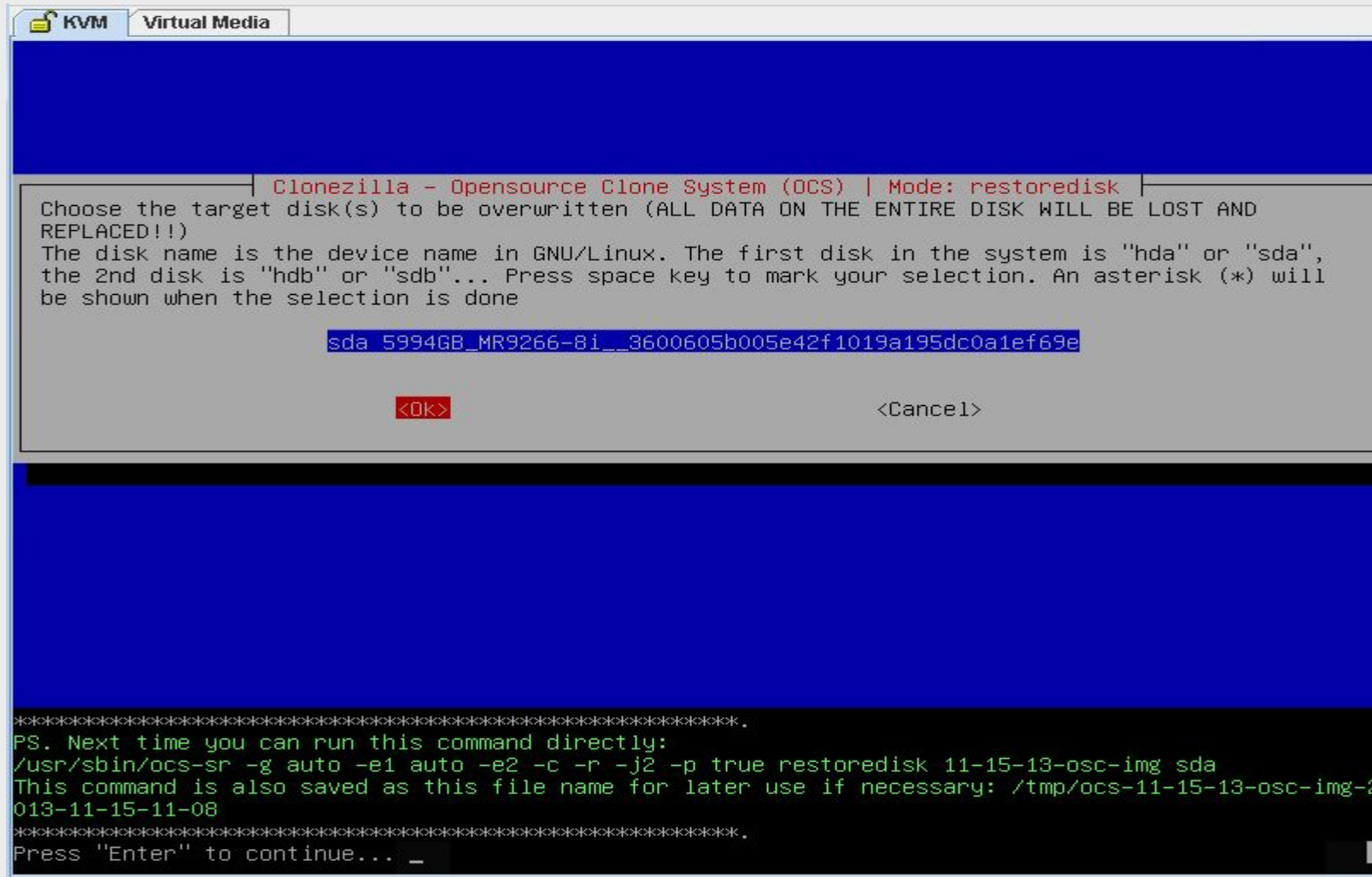
Restore Disk – Select Image : ucs05-build-img/ucs34-control-img/ucs05-compute-img
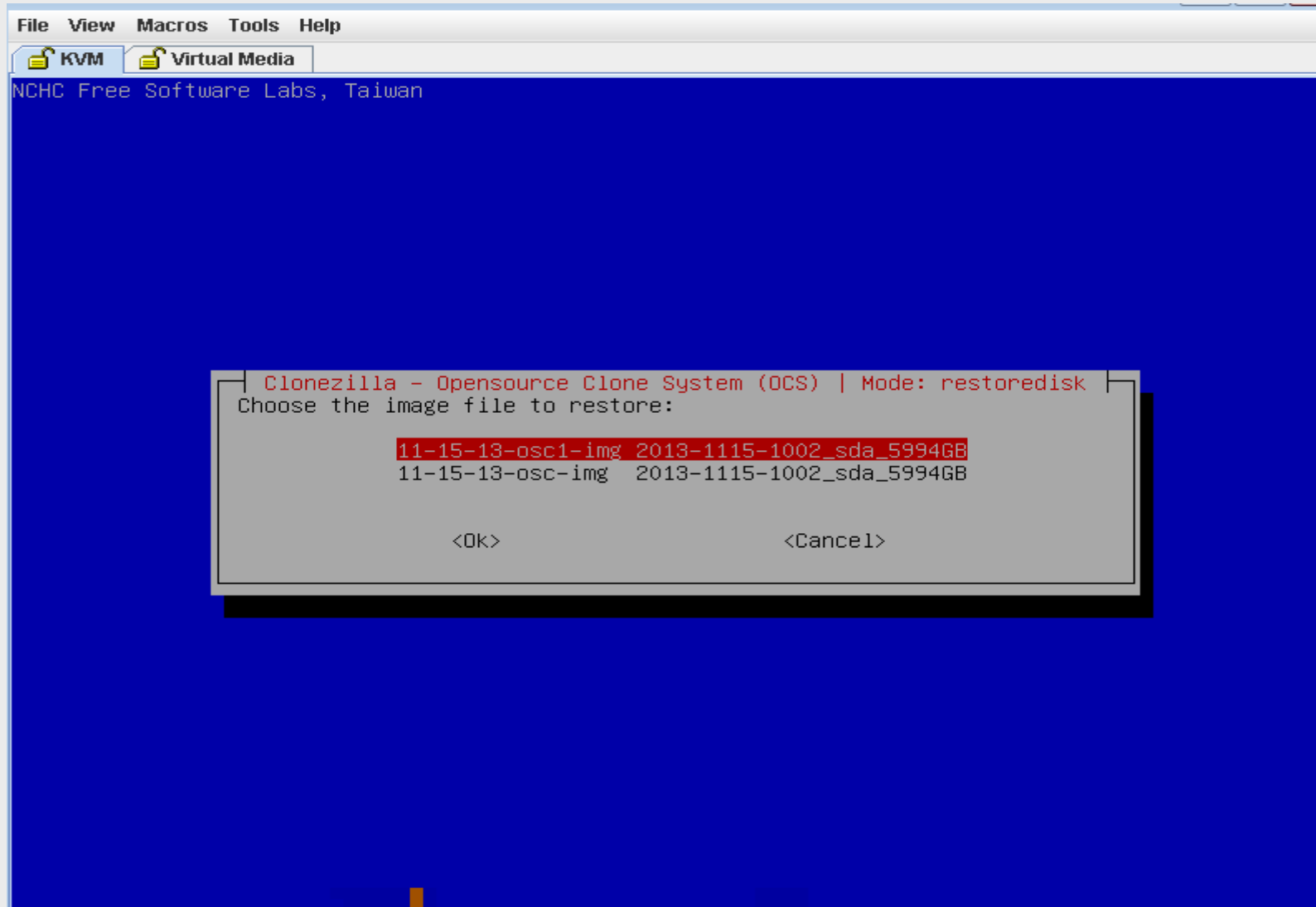
Restore Disk
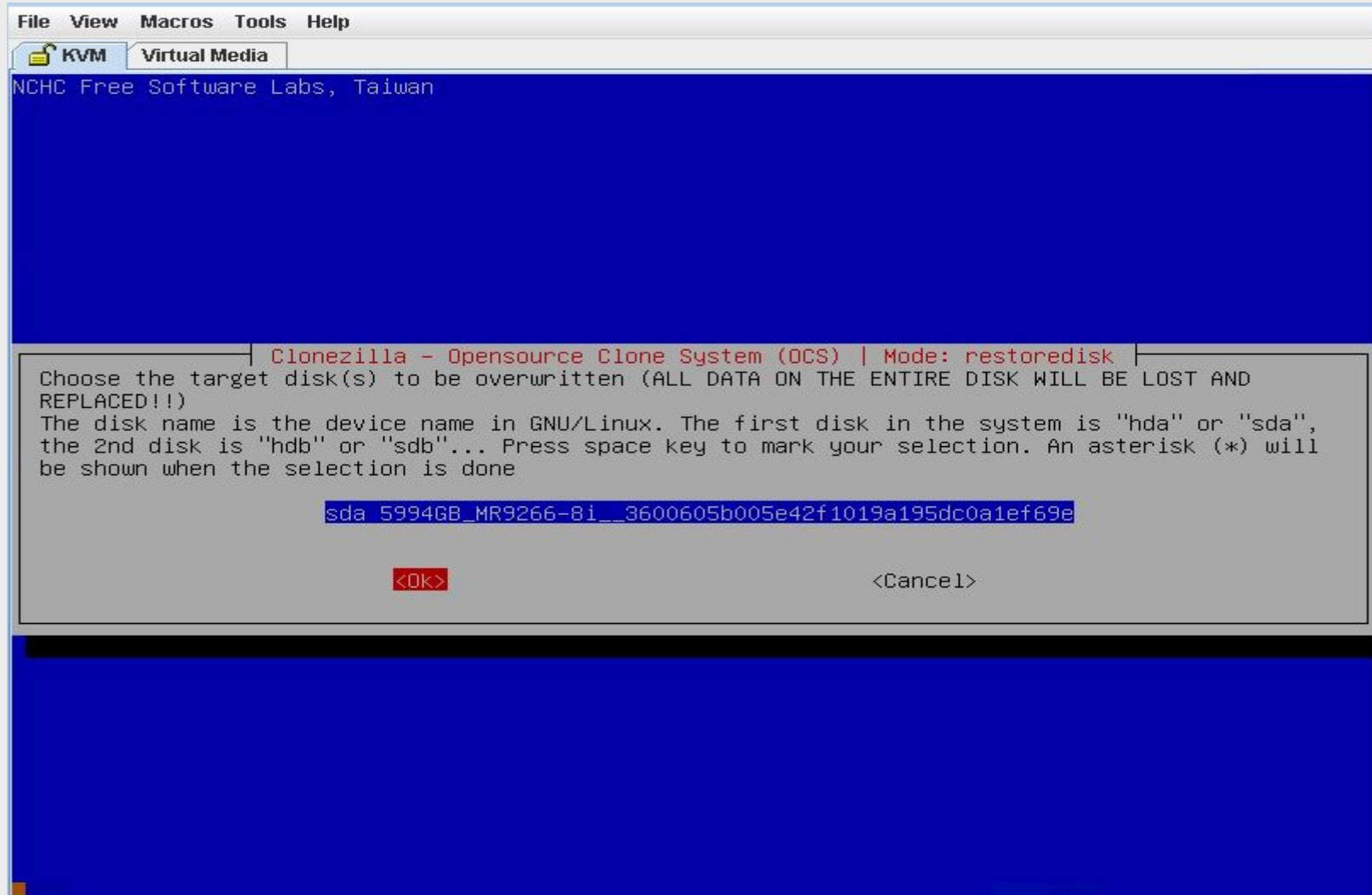
Ex. Restore Disk

Ex. Restore Disk Cont.


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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

Ex. Restore Disk Completed - Reboot

After reboot, use CTRL-ALT-F2 to get the login window (If you are not in login window)
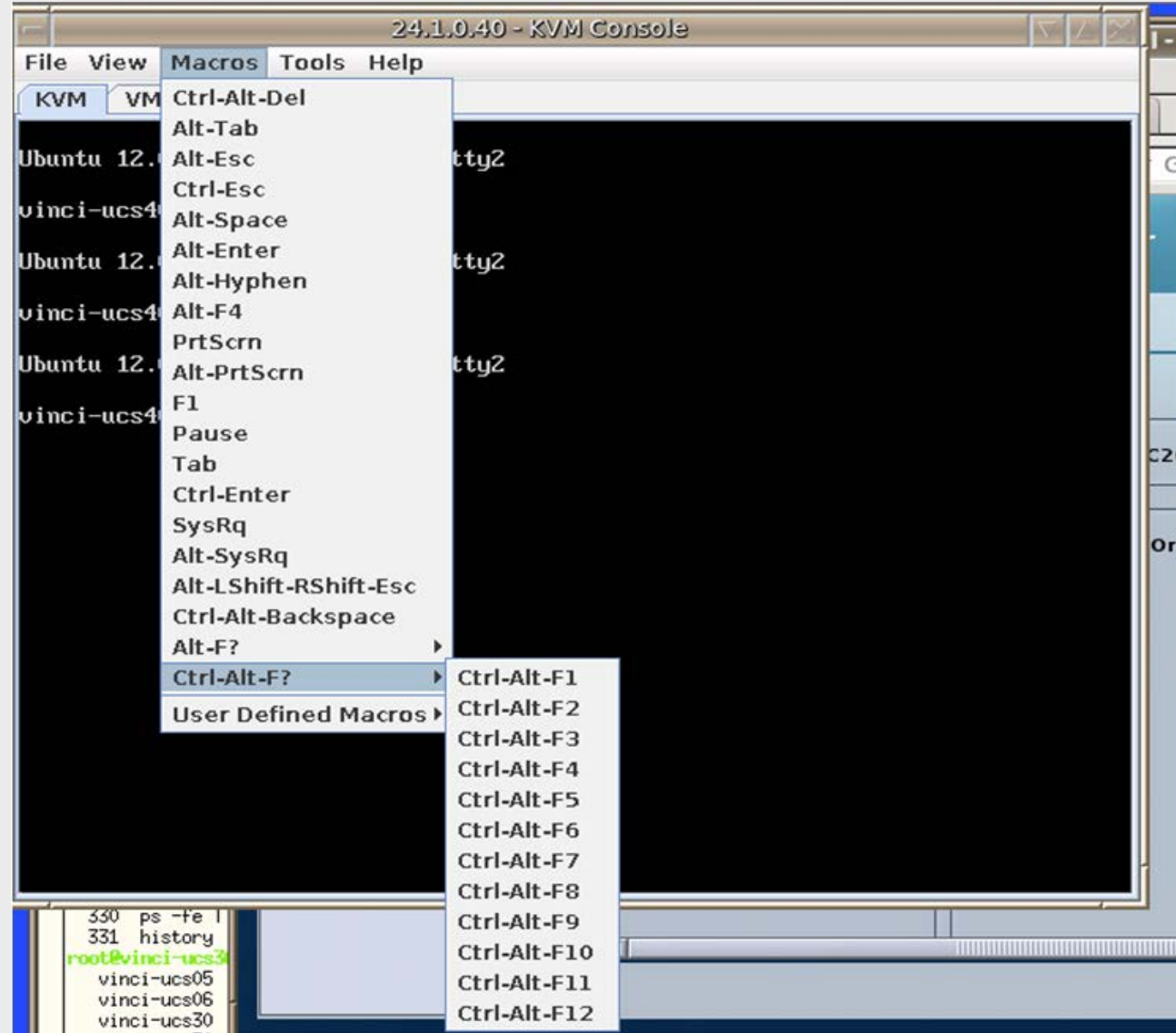
Issues reported by our users when restoring images

Issue #1 encountered by our users - KVM console issue

The console application file viewer.jnlp(172.29.21.213@0@1391192569073) can't be opened by proper java application.

Solution:
Download following JRE version and reboot Apple MAC:
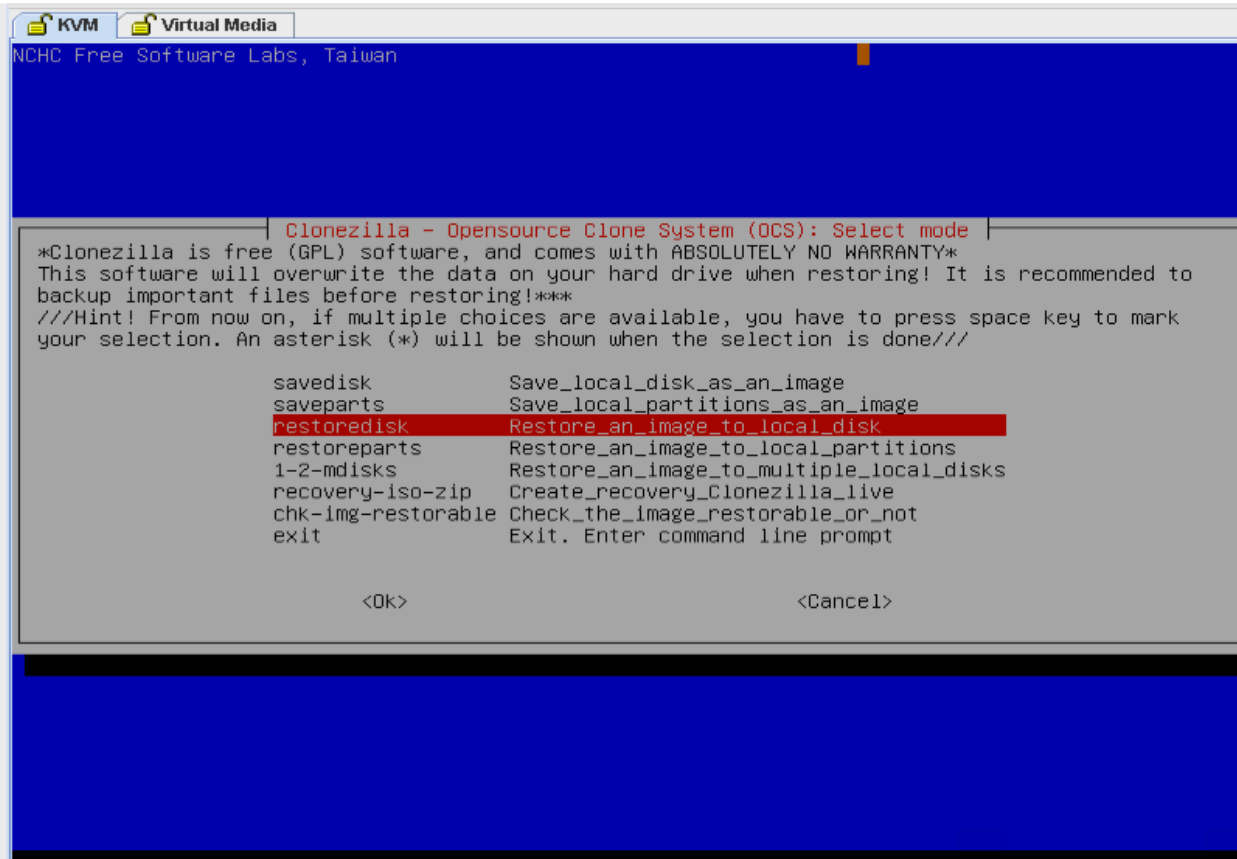java -version
java version "1.7.0_51"
Java(TM) SE Runtime Environment (build 1.7.0_51-b13)
Java HotSpot(TM) 64-Bit Server VM (build 24.51-b03, mixed mode)

# Issue #2 encountered by our users - The following screen didn't show up:

Solution: this is pure network configuration issue.

I used user name "cisco" to access, but found that there is no such user on our repository, so I used "root".

Issue #3 encountered by our users - can't choose boot option to pick Cisco KVM vHDD

After clonezilla iso is installed, can't choose boot option to pick Cisco KVM vHDD, and change BIOS boot order from CMIC GUI does not take effect:
The following menu should be popped up after I try to change boot order (hit Fn+F6 keys), and then I can choose "Cisco vKVM-Mapped vHDD1.22) after clonzilla is installed, but if BIOS version is old (built in 1/31/2013), so it always boot up the system from vKVM-Mapped vDVD.122.
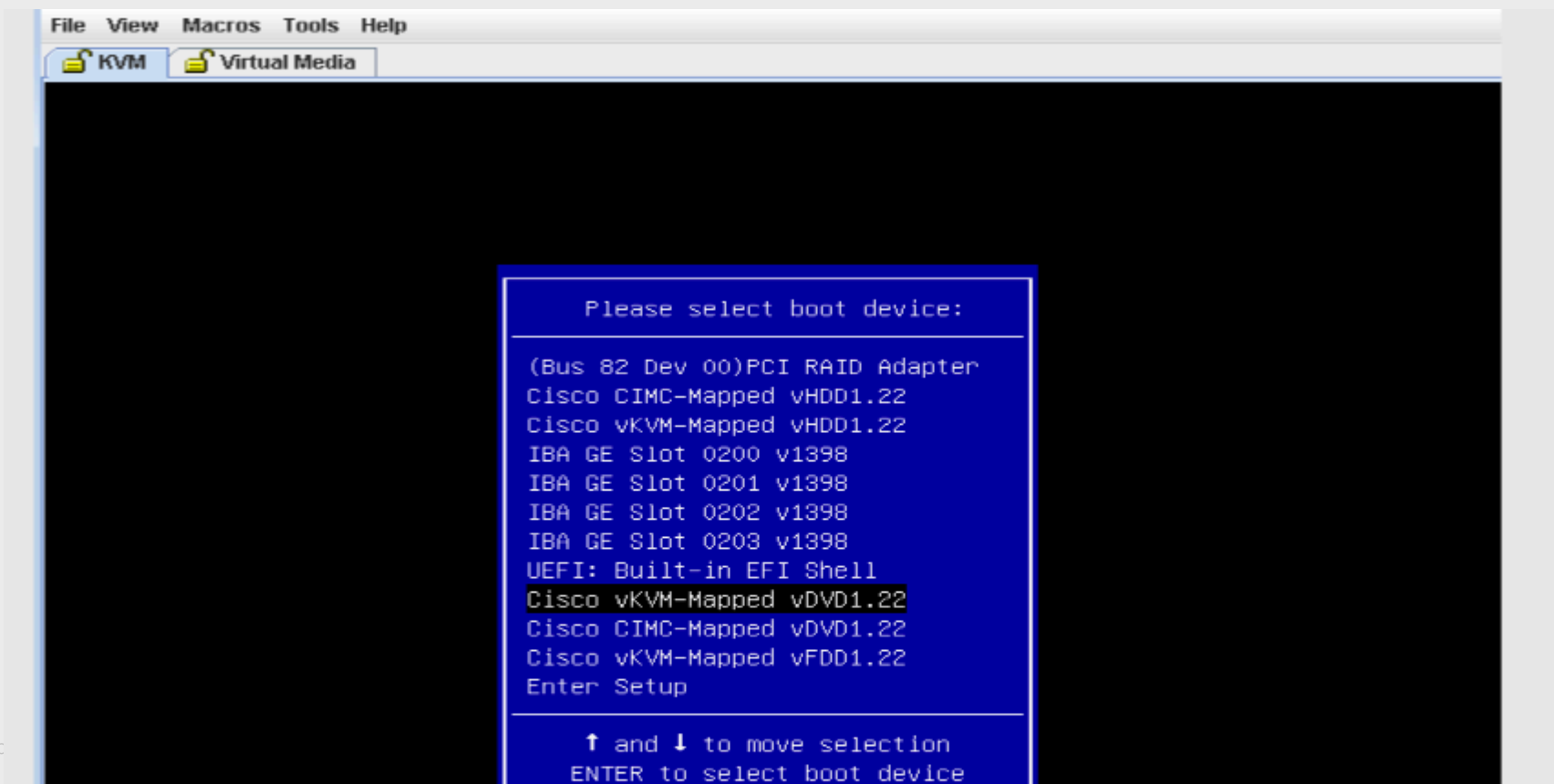
Issue #3 encountered by our users - can't choose boot option to pick Cisco KVM vHDD

Solution:
The BIOs version is old. Upgraded BIOS with: ucs-c220-huu-1.5.4-3.iso

<Lei> 1). On KVM console, "Virtual Media" tab, add the above bios iso as the image. 2). Reboot the UCS and change the boot order to "Cisco vKVM-mapped vDVD1.22". 3). After root the screen pops up asking to upgrade the bios, select upgrade all. Click "yes" when prompt asking to reboot. 4). The KVM console and CMIC will be lost after reboot. Wait for around 10 minutes and reconnect CMIC. Check on the CMIC GUI verify that the BIOS version is updated.
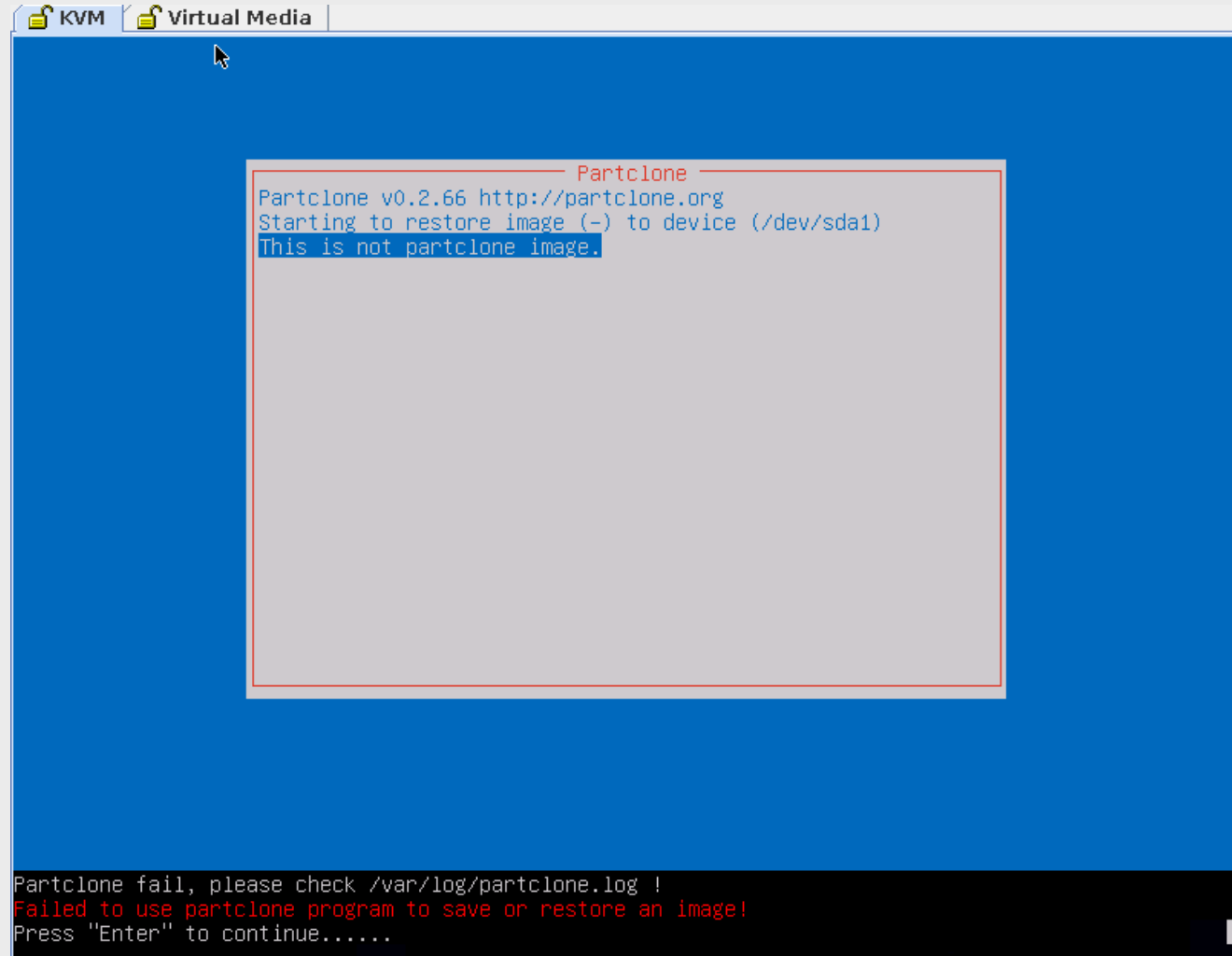
Issue #4 encountered by our users - KVM console connection failure:
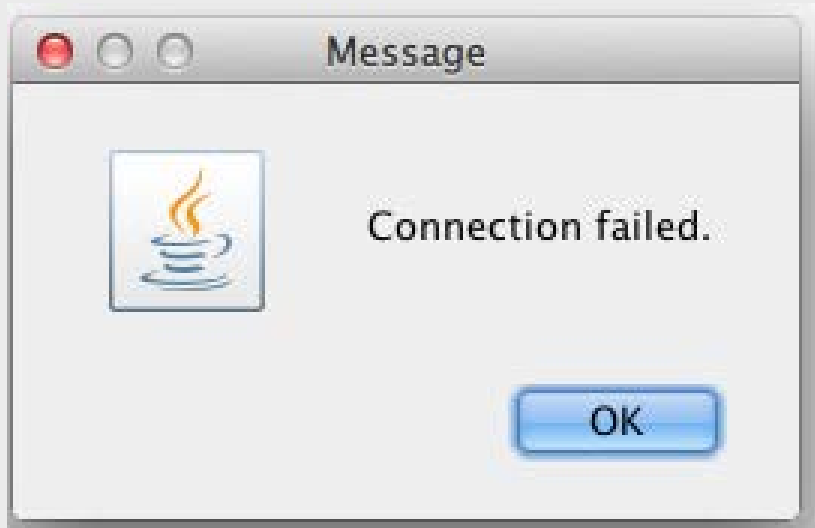
Solution:
I went to the lab and unplug and plug in the power for the 2 UCSs, now it is connecting to it.

Issue #5 - If you hit permission error. Change the file owner when tar .tgz file and start Clonezilla again