Clonezilla

The Free and Open Source Software for Disk Imaging and Cloning

Create Recovery Clonezilla

In this example: Create a autorun recovery Clonezilla live CD or USB flash drive (Step by step)

1. Boot the machine via Clonezilla live
2. The boot menu of Clonezilla live
3. Here we choose 800x600 mode, after pressing Enter, you will see Debian Linux booting process:
4. Choose language
5. Choose keyboard layout
6. Choose "Start Clonezilla"
7. Choose "device-image" option
8. Choose "local_dev" option to assign sdb1 as the image home
9. Select sdb1 as image repository, then choose "restoredisk" option
10. Choose the image you want to include in the recovery CD or USB flash drive:

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- Boot the machine via Clonezilla live ^TOP^

  In this example, the machine has 2 disks, 1st disk's name is sda (device name in GNU/Linux), 2nd disk's device name is sdb. We already have a Clonezilla image in sdb. //NOTE// You must first create an image and it should exist in dir /home/partimag, otherwise later the menu "recovery-iso-zip" won't be shown.
  In this example, the image name is called "xenial-x64-20170924":

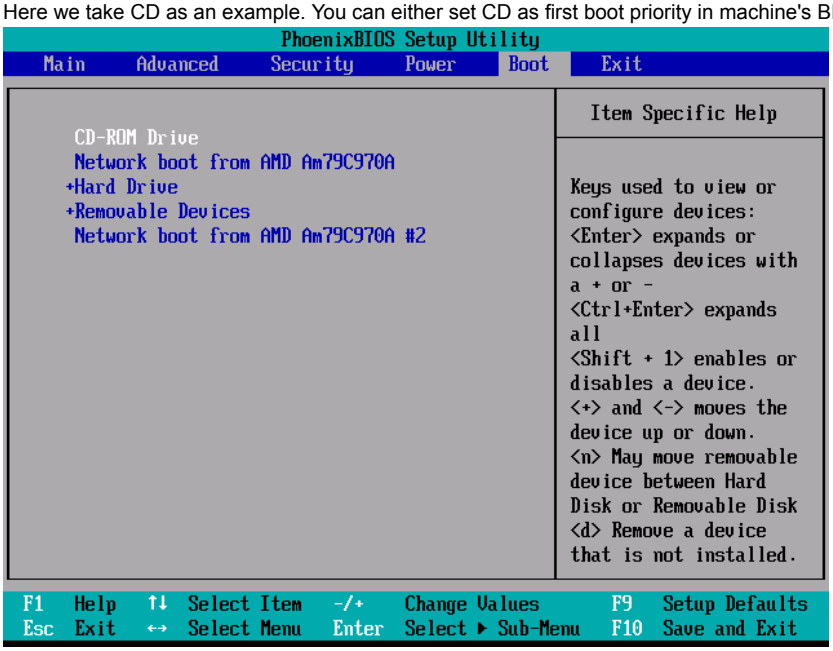
```
root@debian:~# ls -lh /home/partimag/
total 28K
drwxr-xr-x 2 root root 4.0K Sep 24 04:29 Docs
drwx------ 2 root root  16K Sep 24 03:45 lost+found
drwxr-xr-x 2 root root 4.0K Sep 24 04:29 Photos
drwxr-xr-x 2 root root 4.0K Sep 24 04:51 xenial-x64-20170924
```

  and its contents are:

```
root@debian:~# ls -lh /home/partimag/xenial-x64-20170924/
total 447M
-rw-r--r-- 1 root root  755 Sep 24 04:51 blkdev.list
-rw-r--r-- 1 root root  407 Sep 24 04:51 blkid.list
-rw-r--r-- 1 root root 4.7K Sep 24 04:51 clonezilla-img
-rw-r--r-- 1 root root  159 Sep 24 04:51 dev-fs.list
-rw-r--r-- 1 root root    4 Sep 24 04:51 disk
-rw-r--r-- 1 root root 273K Sep 24 04:51 Info-dmi.txt
-rw-r--r-- 1 root root  187 Sep 24 04:51 Info-img-id.txt
-rw-r--r-- 1 root root 124K Sep 24 04:51 Info-lshw.txt
-rw-r--r-- 1 root root 4.6K Sep 24 04:51 Info-lspci.txt
-rw-r--r-- 1 root root  224 Sep 24 04:51 Info-packages.txt
-rw-r--r-- 1 root root   97 Sep 24 04:51 Info-saved-by-cmd.txt
-rw-r--r-- 1 root root    5 Sep 24 04:51 parts
-rw------- 1 root root 446M Sep 24 04:51 sda1.ext4-ptcl-img.gz.aa
-rw-r--r-- 1 root root  512 Sep 24 04:51 sda2-ebr
-rw-r--r-- 1 root root   36 Sep 24 04:51 sda-chs.sf
-rw-r--r-- 1 root root 1.0M Sep 24 04:51 sda-hidden-data-after-mbr
-rw-r--r-- 1 root root  512 Sep 24 04:51 sda-mbr
-rw-r--r-- 1 root root  405 Sep 24 04:51 sda-pt.parted
-rw-r--r-- 1 root root  366 Sep 24 04:51 sda-pt.parted.compact
-rw-r--r-- 1 root root  250 Sep 24 04:51 sda-pt.sf
-rw-r--r-- 1 root root   53 Sep 24 04:51 swappt-sda5.info
```

  Now we will use the image "xenial-x64-20170924" to create a recovery Clonezilla live CD, which can be used to recover the sda if the system on sda crashes.
  Once you have the bootable Clonezilla Live CD/DVD or USB flash drive, you can boot the machine you want to clone via Clonezilla live. Remember to use the Clonezilla live CD or USB flash drive to boot the machine. For example, if you have Clonezilla Live in USB flash drive, you have to boot it via USB device (Ex. USB-HDD or USB-ZIP). If necessary, you can set the first boot priority in the BIOS as USB-HDD or USB-ZIP so that it can

boot Clonezilla Live from your USB flash drive.
Here we take CD as an example. You can either set CD as first boot priority in machine's BIOS like this:

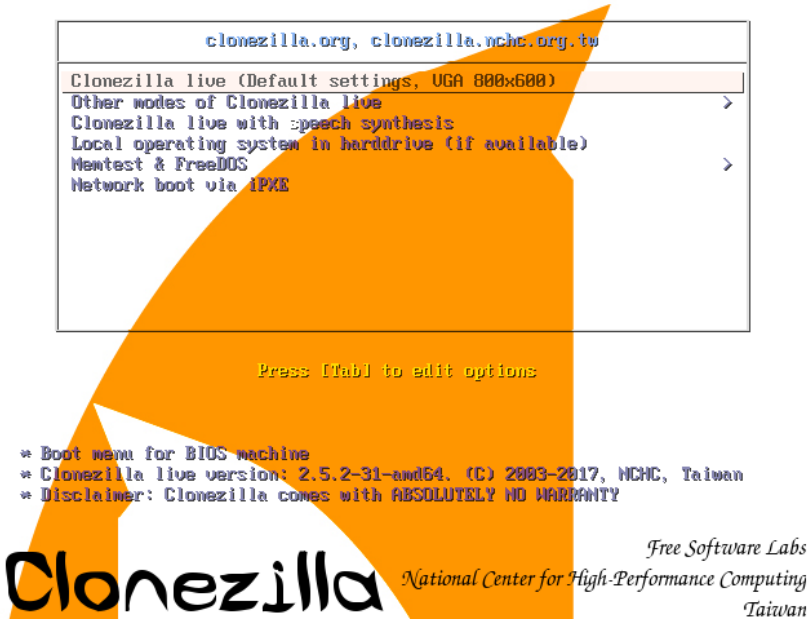


Or by pressing a hotkey (e.g. Esc or F9) when you boot the machine, you will see the boot menu of BIOS like this:

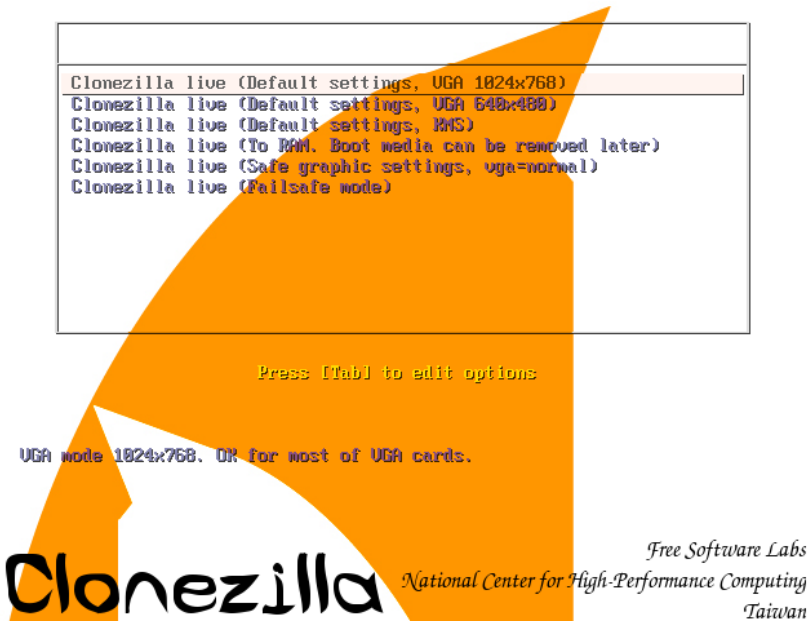
Check your motherboard manual for more details about how to boot your machine via CD.

- The boot menu of Clonezilla live ^TOP^

  Here is a screenshot of Clonezilla Live boot menu:

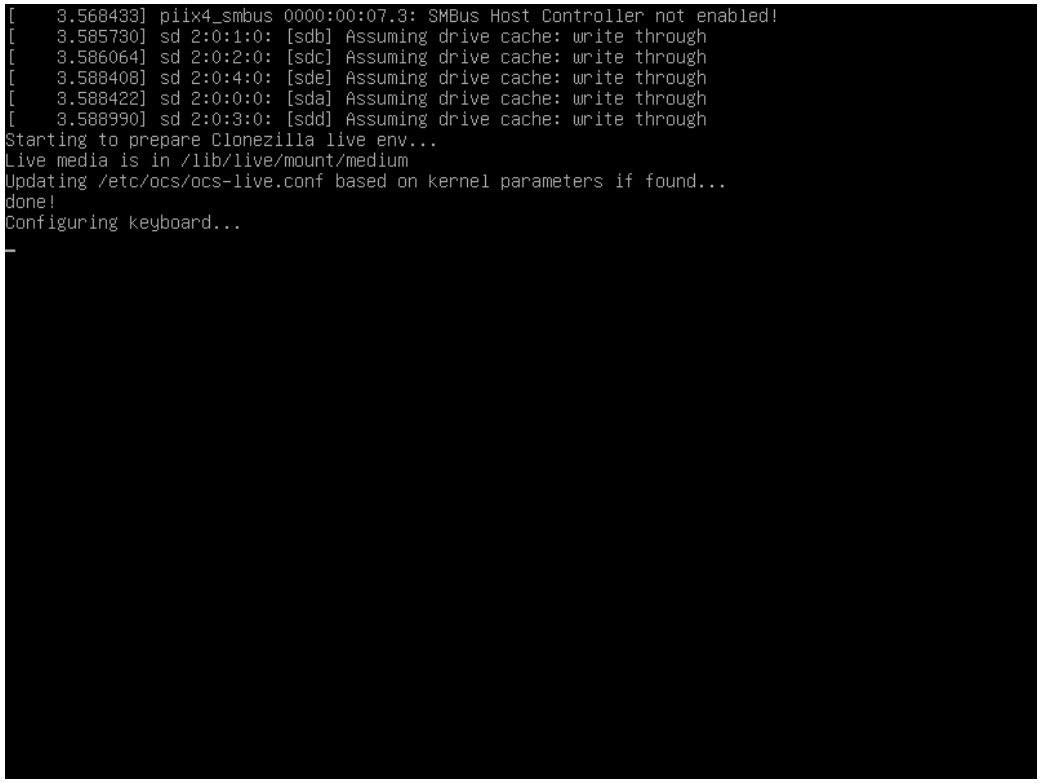


The first one is the default mode for Clonezilla Live. It will default to framebuffer mode with a resolution of 800x600.
There are more modes which you can choose in the 2nd choice "Other modes of Clonezilla live", e.g. 1024X768 or 640x480 one if you want, as shown here:



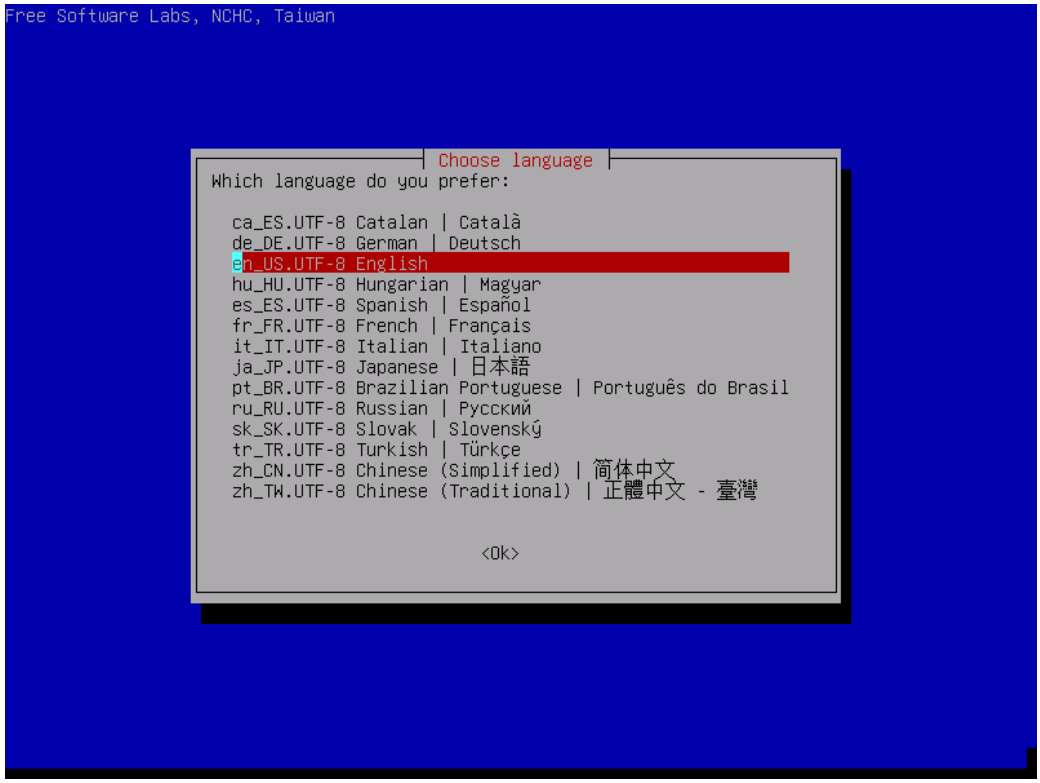
The choice, "Clonezilla live (To RAM. Boot media can be removed later), is the same function with the 1st one except when Clonezilla live booting finishes, all the necessary files are copied to memory. Therefore you can remove the boot media (CD or USB flash drive) then.
If you do not need Chinese or Japanese environment or if your computer experiences problems in the framebuffer mode, you can choose the one "Clonezilla Live (no framebuffer)" to clone in the English environment.
The choice, "Clonezilla live (failsafe mode)", is for something goes wrong when you are not be able to boot your machine, such as ACPI of your machine is not supported in the kernel.
If you want to boot local OS in your harddrive, you can choose the one "Local operating system in harddrive (if available)". This is an extra function in the boot media that has nothing to do with Clonezilla Live.
The choice, "FreeDOS", allows you to boot your machine into Free DOS. This is an extra function in the boot media that has nothing to do with Clonezilla Live.
The choice, "Memory test using Memtest86+," is for memory testing using Memtest86+. This is an extra function in the boot media that has nothing to do with Clonezilla Live.
The choice, "Network boot via etherboot" or "Network boot via gpxe" is used to perform a network boot via Etherboot or gPXE. If your computer does not have a PXE network, you can use this to do boot from a network. This is an extra function in the boot media that has nothing to do with Clonezilla Live.

- Here we choose 800x600 mode, after pressing Enter, you will see Debian Linux booting process: ^TOP^

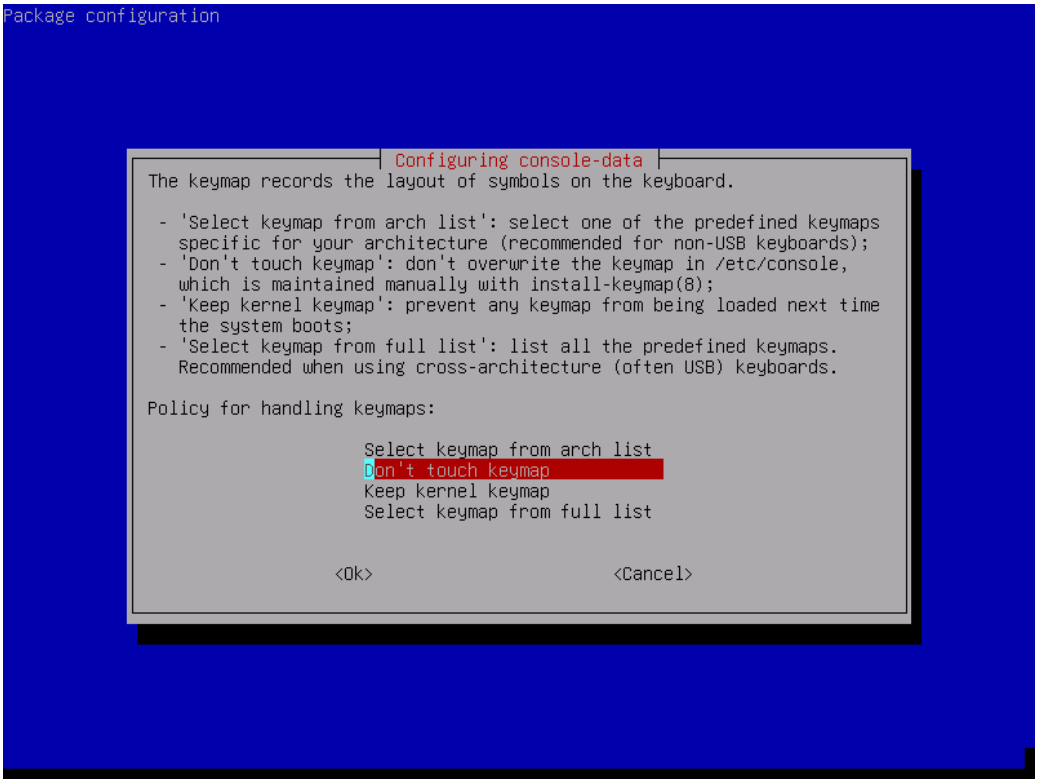


//NOTE// Do _NOT_ choose the To RAM option of boot menu in this case. It will _NOT_ work for creating recovery ISO or zip file.

- Choose language ^TOP^

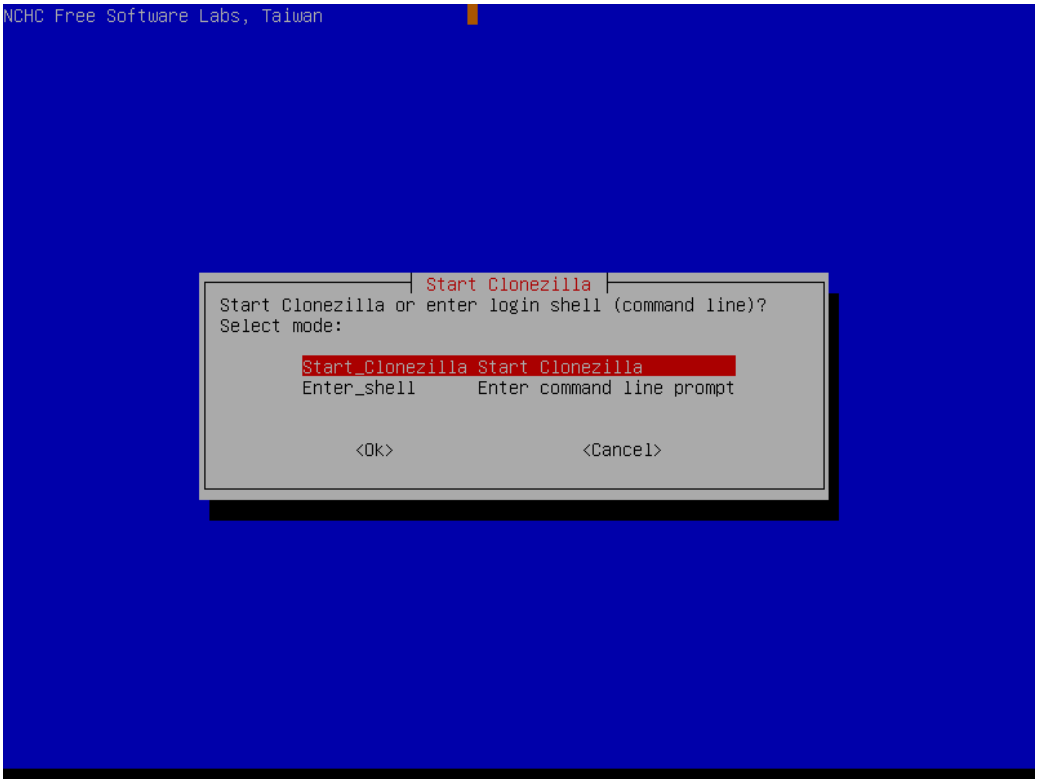


- Choose keyboard layout ^TOP^

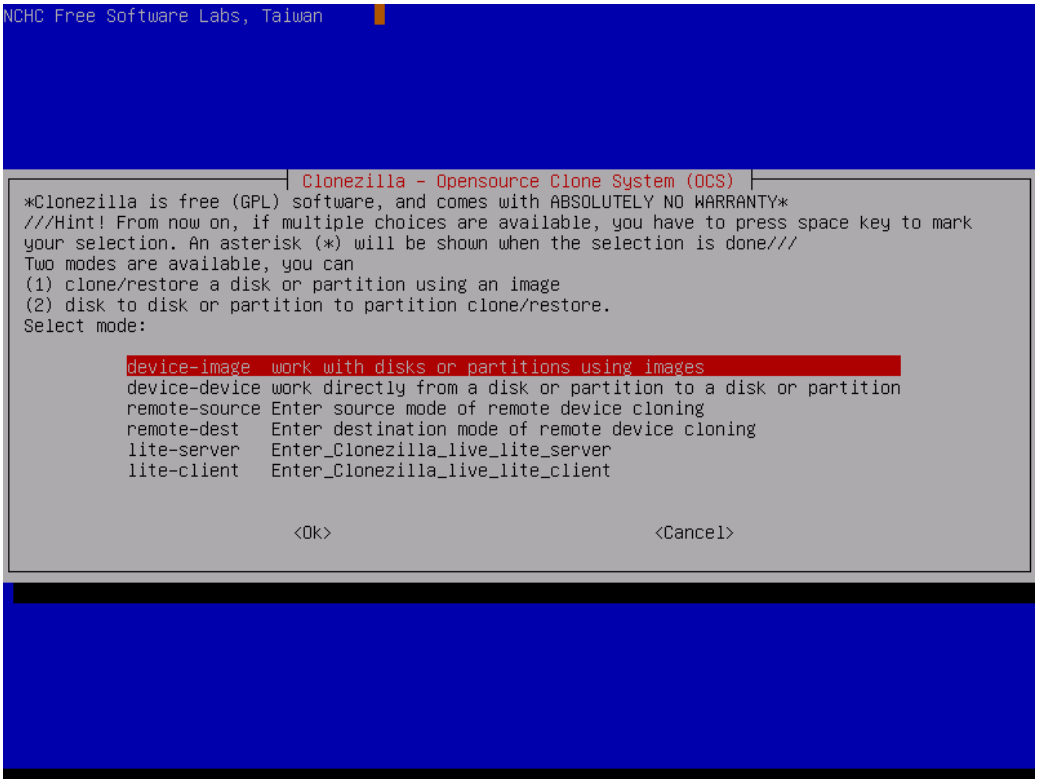


The default keyboard layout is US keybaord, therefore if you are using US keyboard, just press enter (i.e. use the option "Don't touch keymap").
If you want to change keymap, you can either choose "Select keymap from arch list" or "Select keymap from full list".
///NOTE/// There is a bug when choosing French keymap in "Select keymap from arch list", so use "Select keymap from full list" to change keymap if you are using French keyboard.

- Choose "Start Clonezilla" ^TOP^

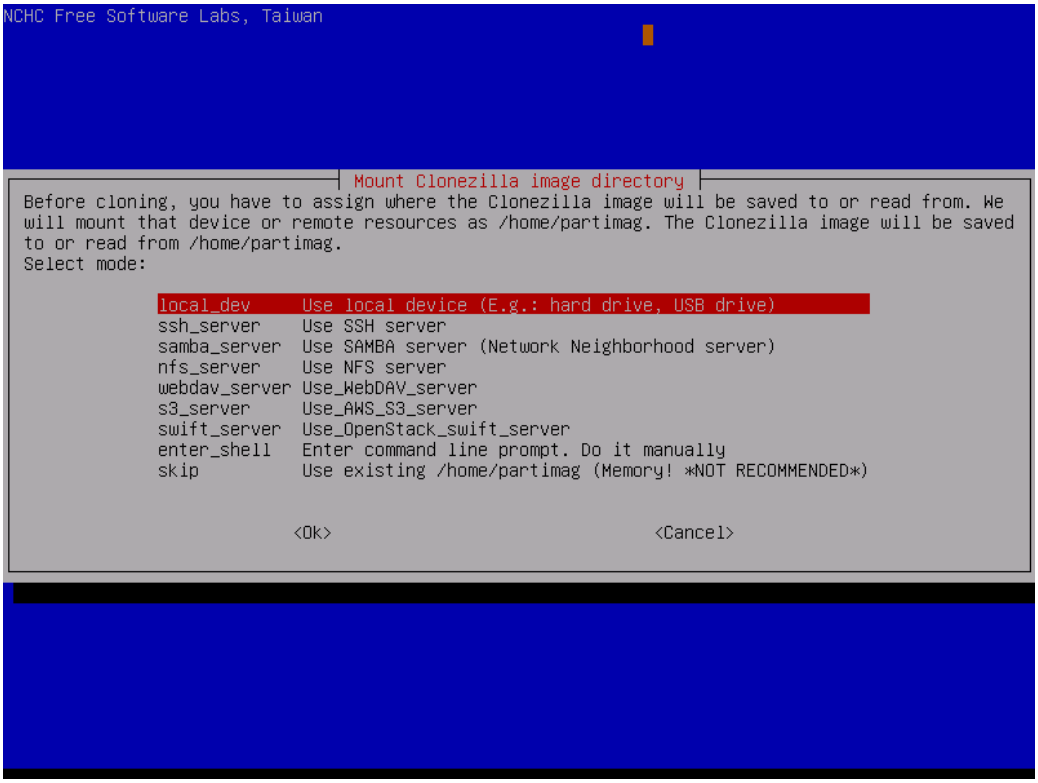


- Choose "device-image" option ^TOP^



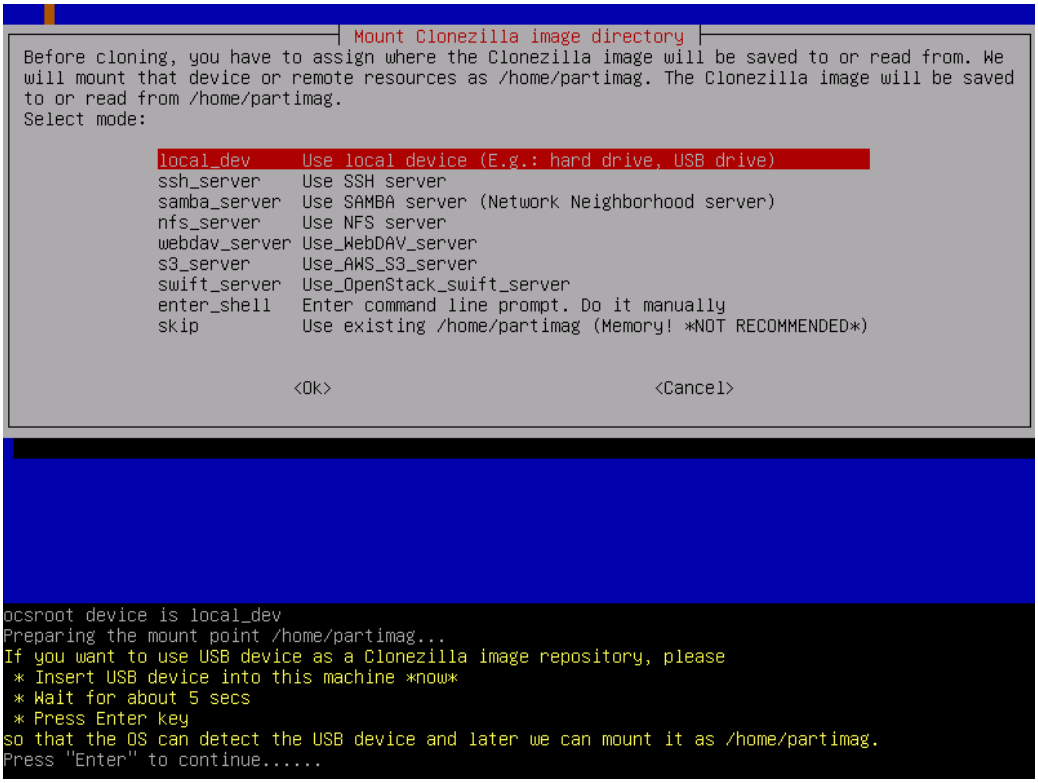
Pay attention to the hints, too. You might need that:
///Hint! From now on, if multiple choices are available, you have to press space key to mark your selection. A star sign (*) will be shown when the selection is done///

- Choose "local_dev" option to assign sdb1 as the image home ^TOP^

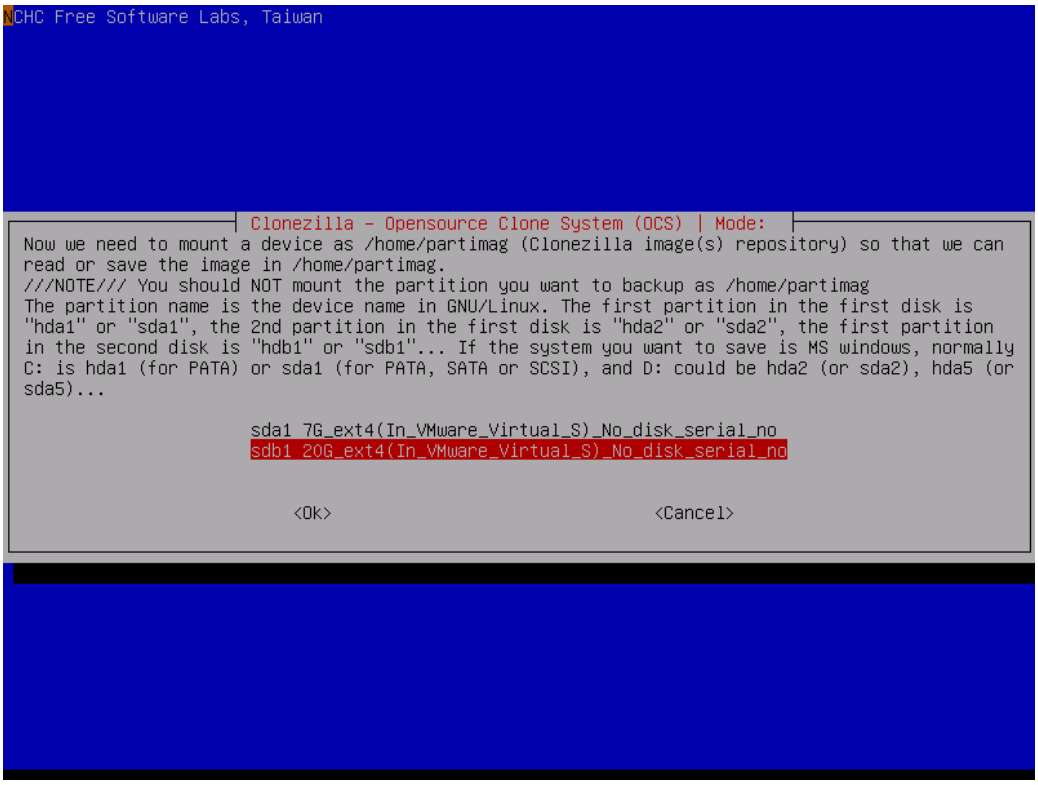


There are other options, e.g. sshfs, samba, nfs or webdav, AWS S3 or Openstack Swift 

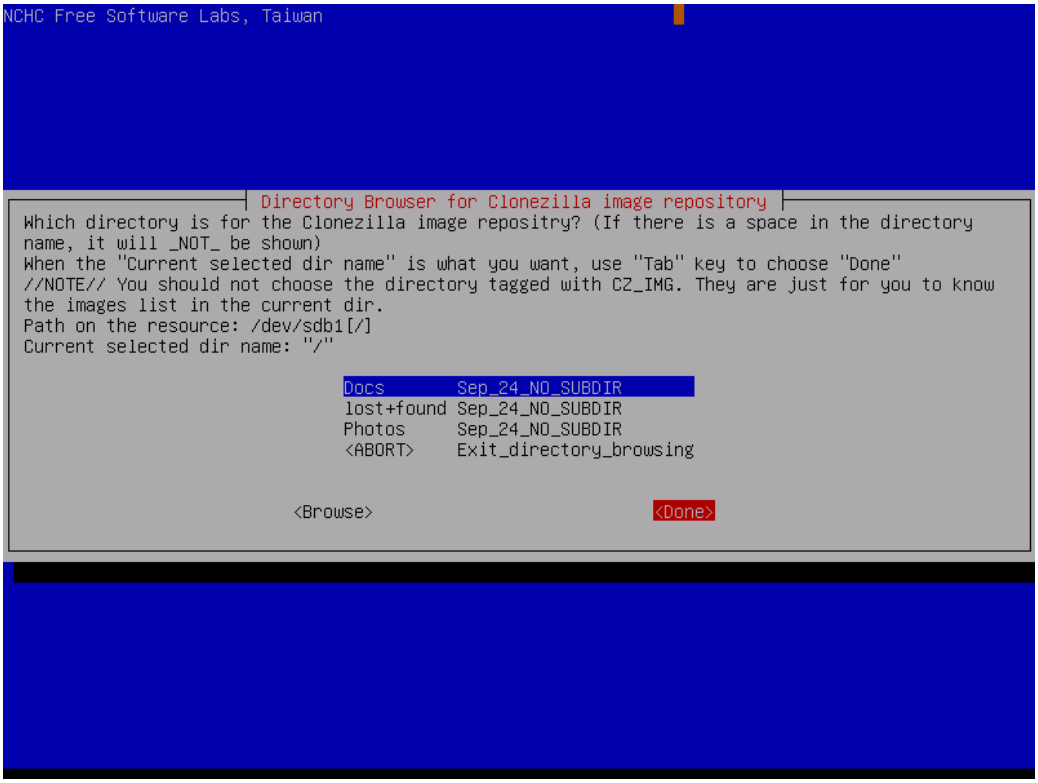
, you can use when network is available. This is very useful when 2nd local disk is not available.
Since we choose "local_dev" option, we can use 2nd disk or USB flash drive to save 1st disk's image. If using USB flash drive as repository, inster USB flash drive and wait a few secs.



- Select sdb1 as image repository, then choose "restoredisk" option ^TOP^

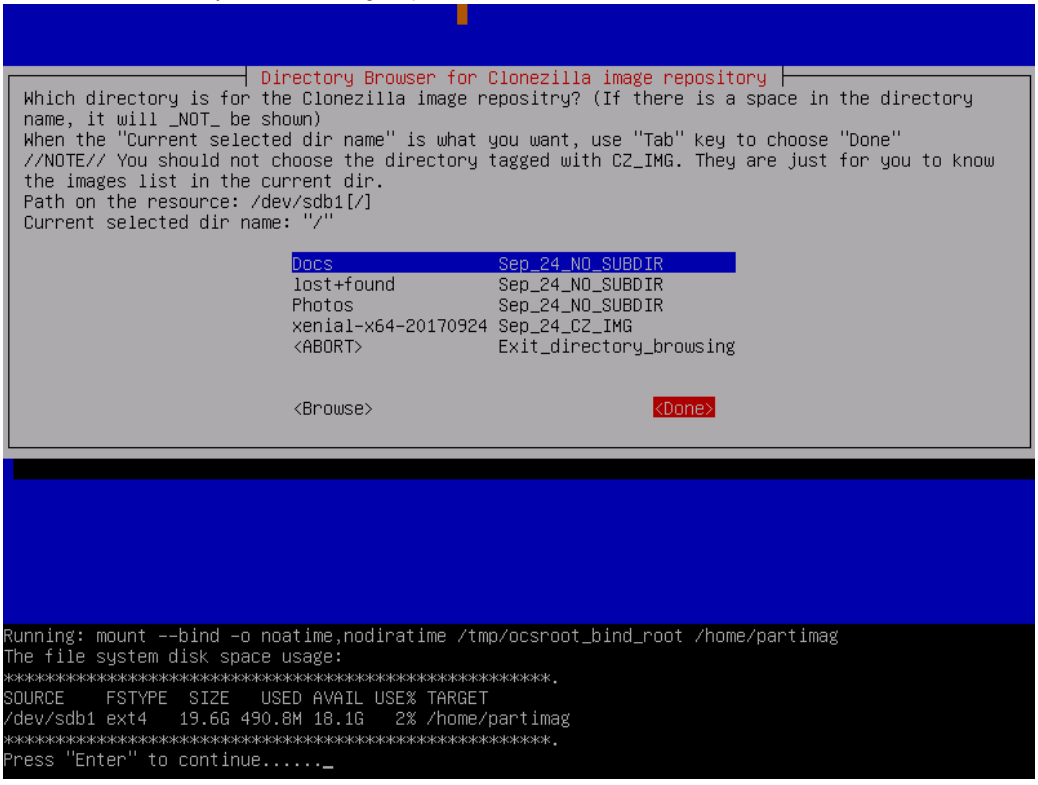


Choose the directory name on /dev/sdb1 as the image repository. Here we put image on the top directory (i.e., Current selected dir name is "/"):

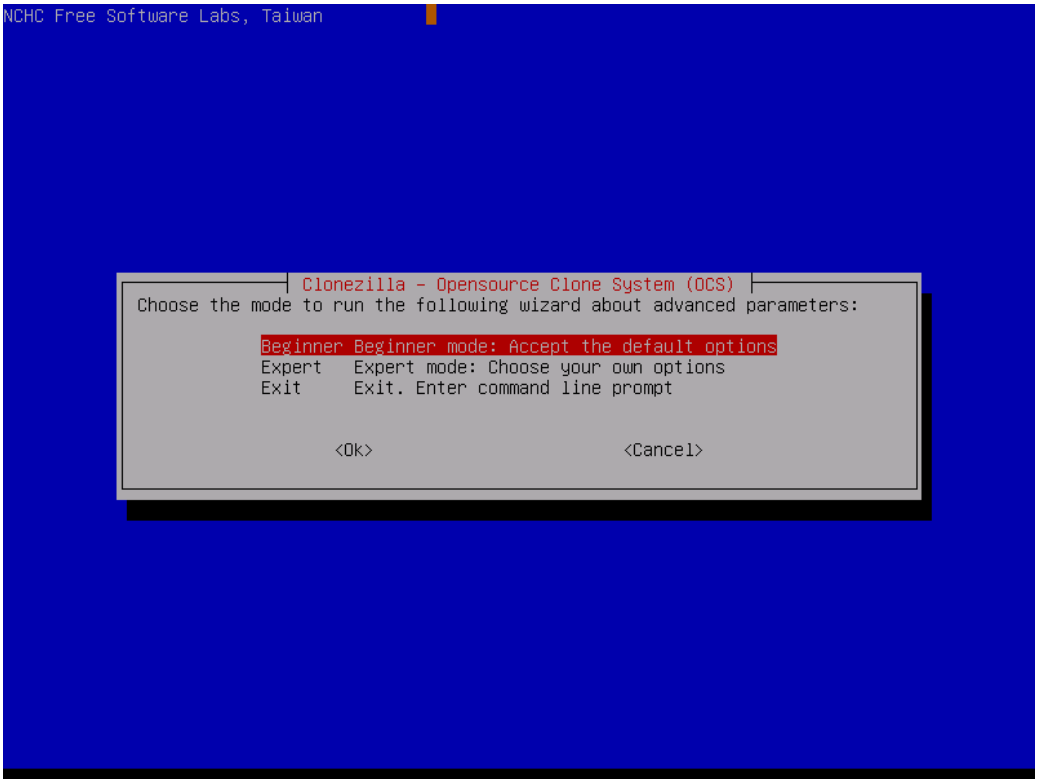


If you are not familiar with the disk or partition name in GNU/Linux, read the hints:
'The partition name is the device name in GNU/Linux. The first partition in the first disk is "sda1", the 2nd partition in the first disk is "sda2", the first partition in the second disk is "sdb1"... If the system you want to save is MS windows, normally C: is sda1, and D: could be sda2, or sda5...'

Then Clonezilla shows you the disk usage report:

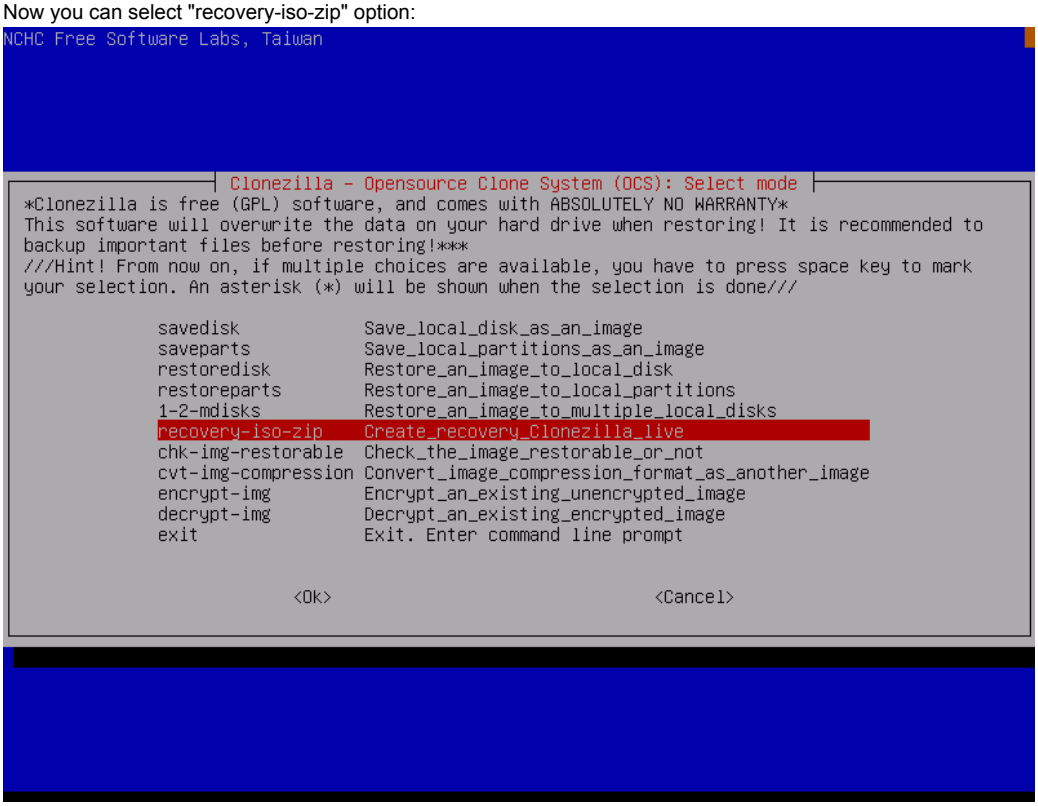


Here we choose "Beginner" mode:



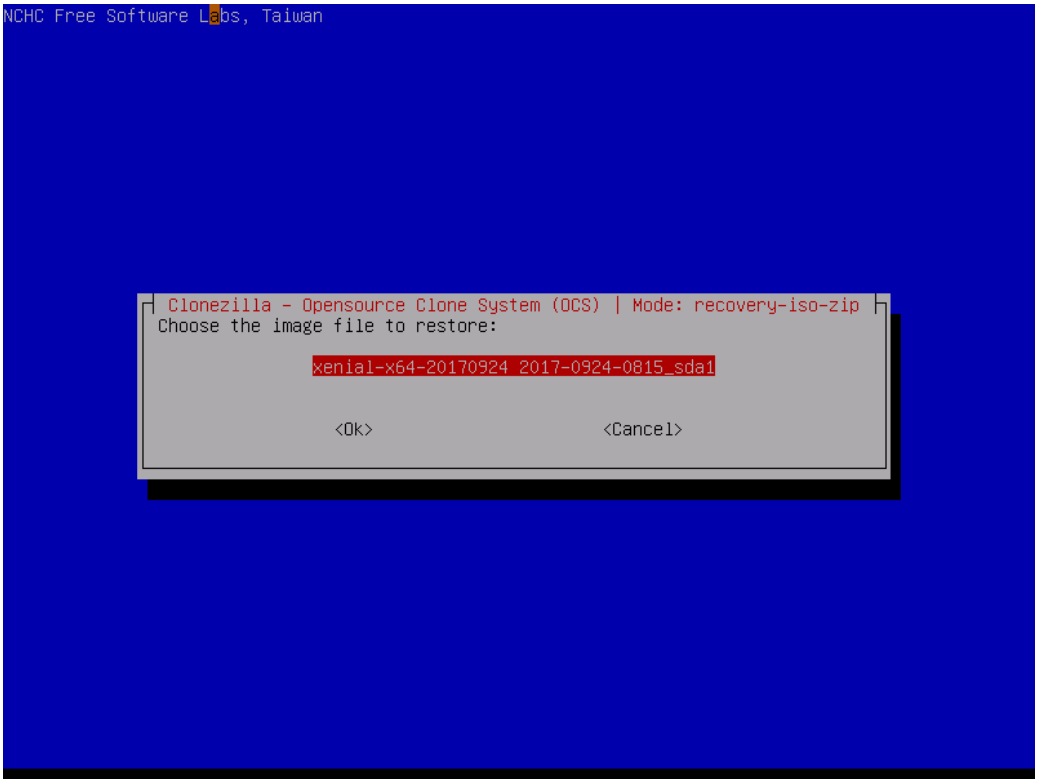
If you choose "Expert" mode, you will have some chances to choose advanced parameters, e.g. imaging program, compression program, etc.. You can see more details here.

Now you can select "recovery-iso-zip" option:

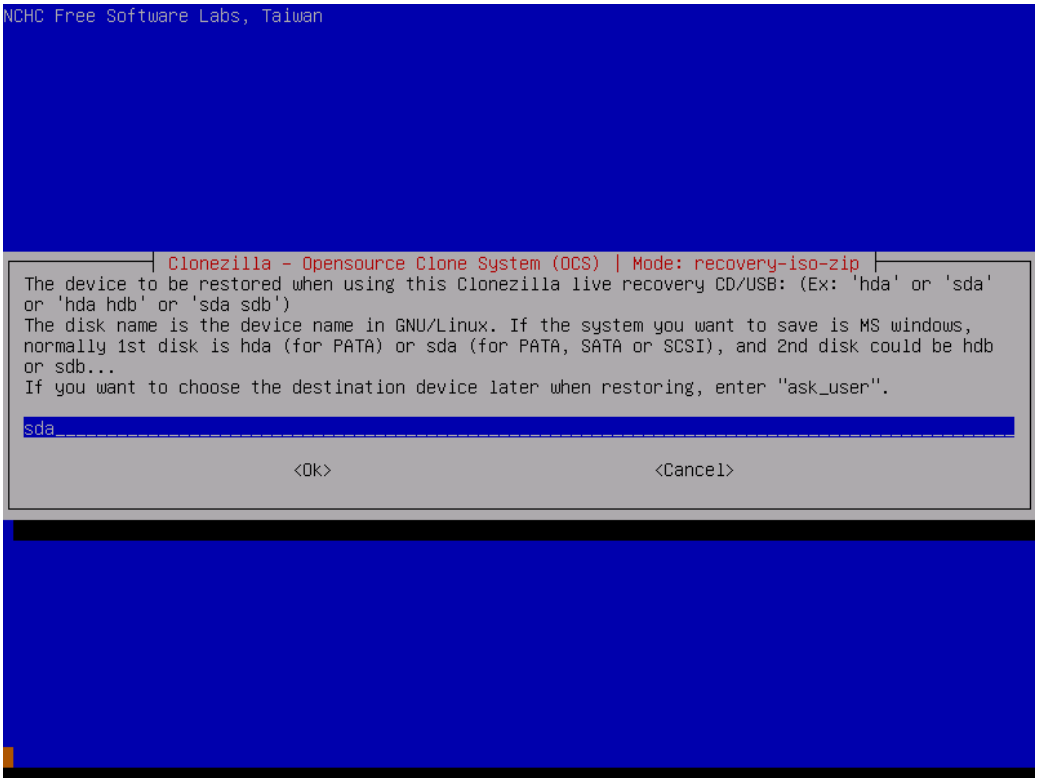


- Choose the image you want to include in the recovery CD or USB flash drive:

^TOP^

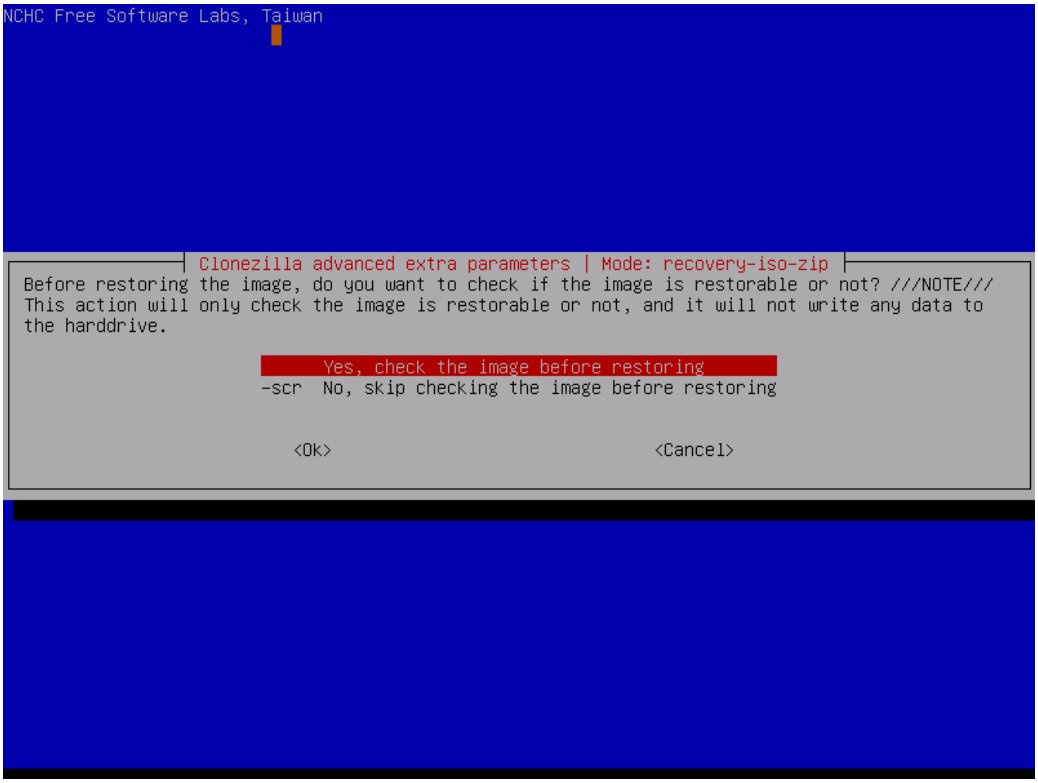


Choose the destination disk to be recovered when the recovery CD or USB flash drive is used:



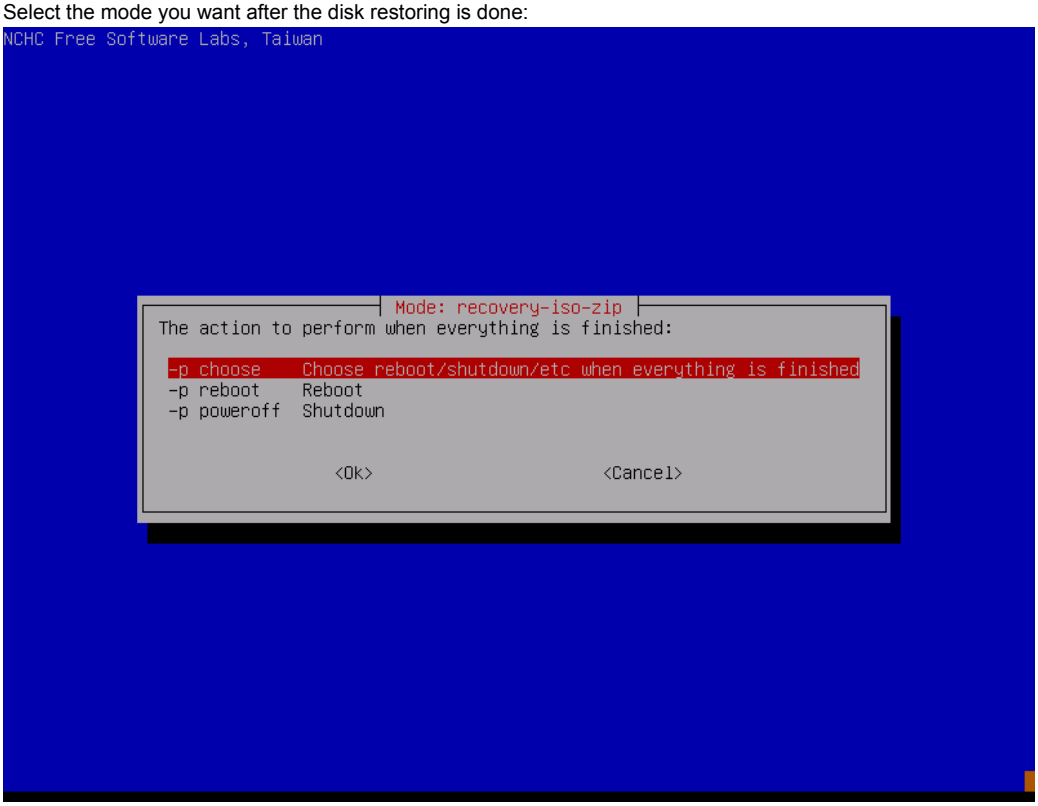
//NOTE// If you want to ask the destination disk after this recovery CD is booted, you can use the keyword "ask_user" and your user will be able to choose the destination disk after he/she boots the recovery CD.

Choose to check the image integrity before really restoring the image to disk sda:



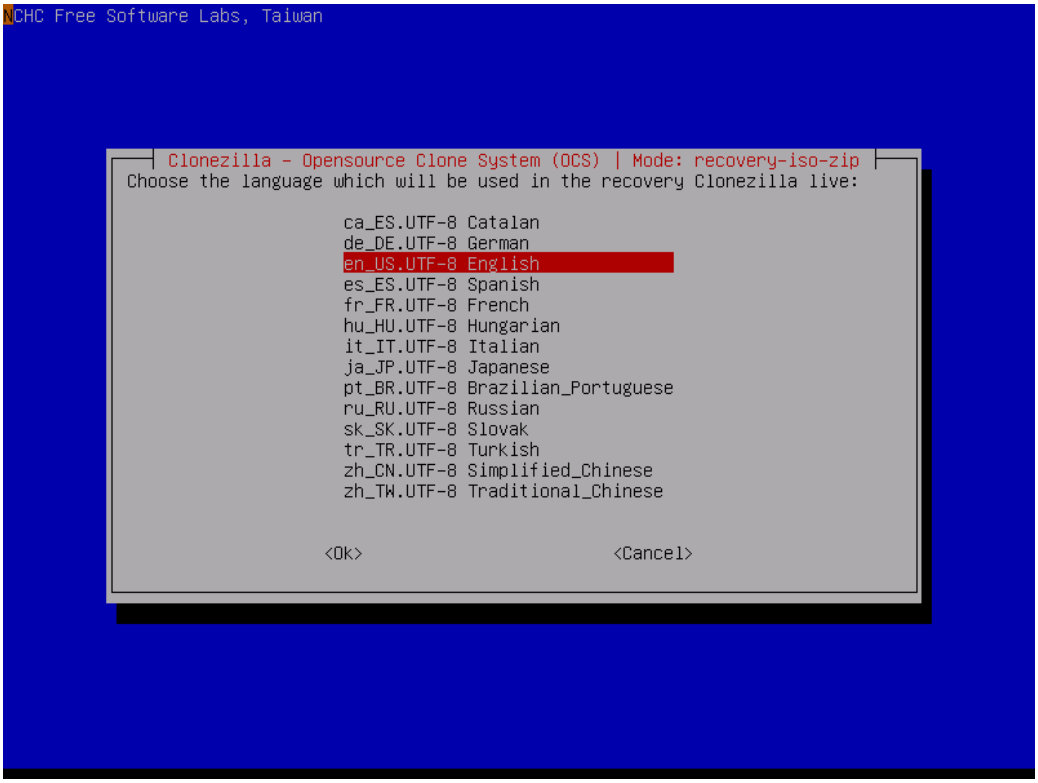
It's recommended to check the image before restoring it. You will not know if the image is broken or not. If you are really sure about the integrity is OK, then of course you can choose "-scr" to skip checking.

Select the mode you want after the disk restoring is done:

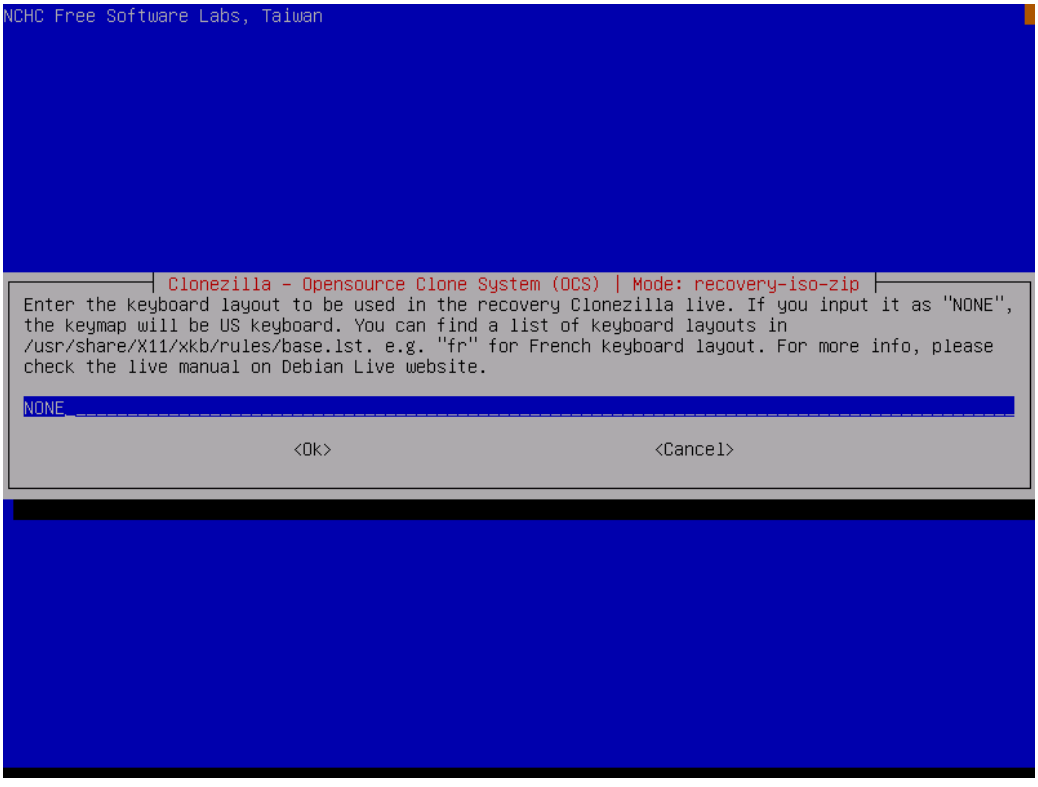


By default we will choose later, but if you have decided, you can choose to reboot or poweroff the machine.

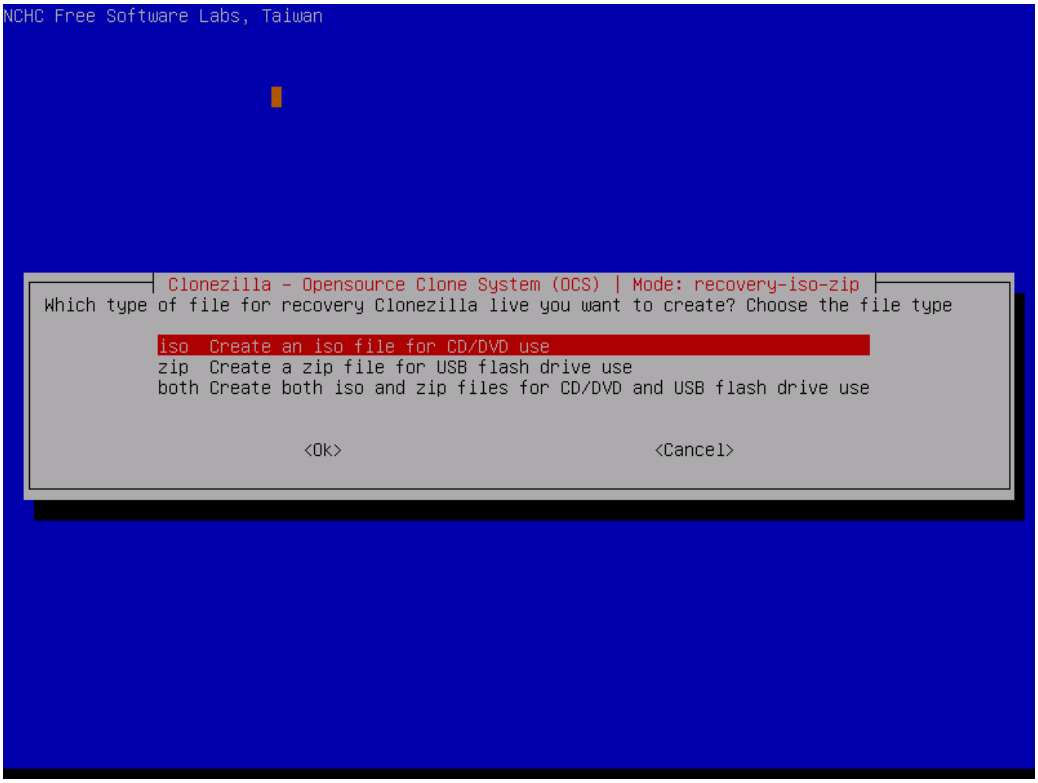
Choose the language when the recovery CD or USB flash drive is used:



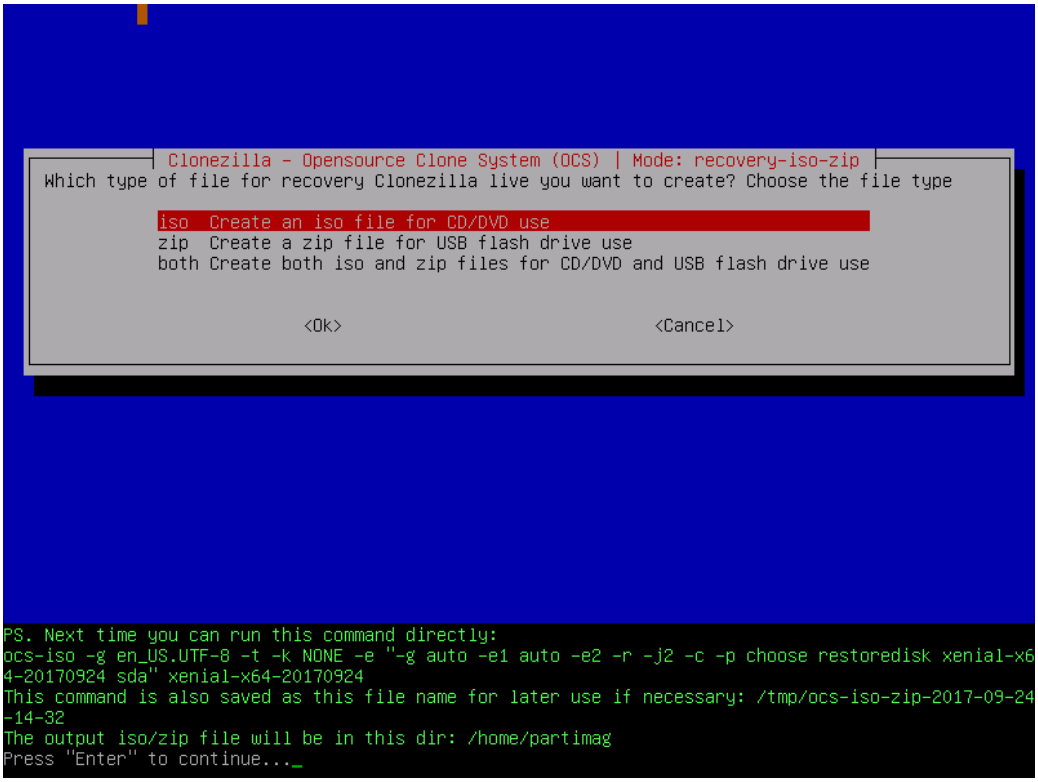
Set the keyboard layout when the recovery CD or USB flash drive is used, here we chose "NONE". That means we won't change the keyboard layout, i.e. the US keyboard layout will be used:



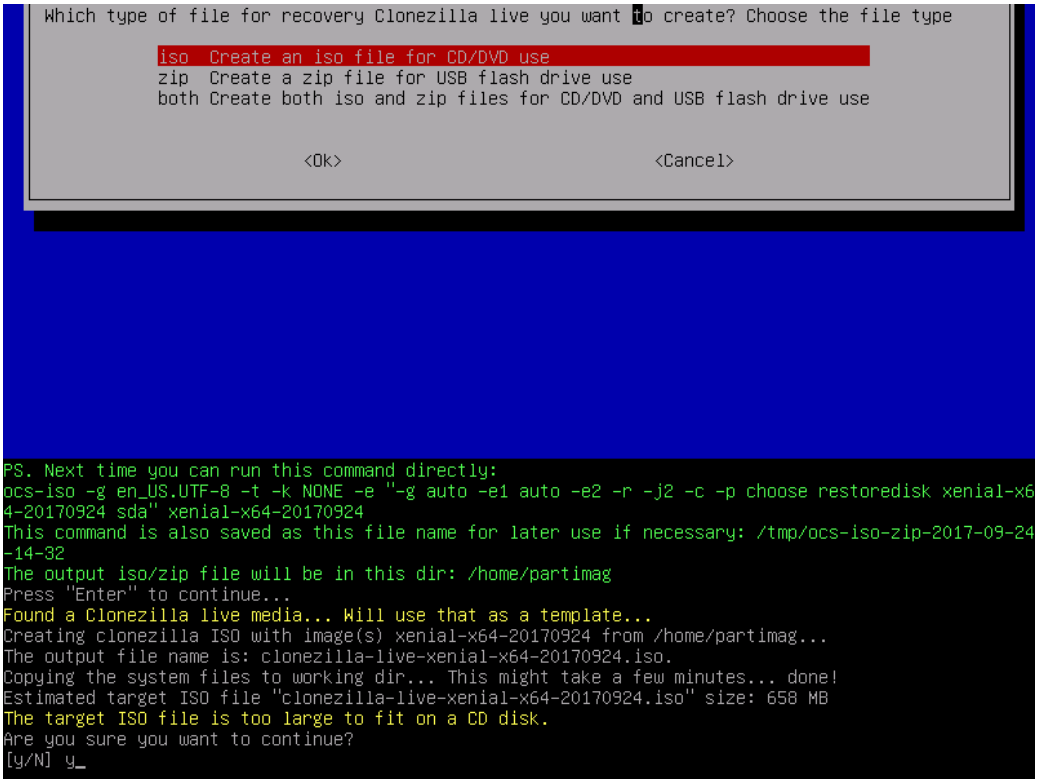
Choose you want to creaet iso file (for CD/DVD), zip file (for USB flash drive) or both. Here we choose iso:



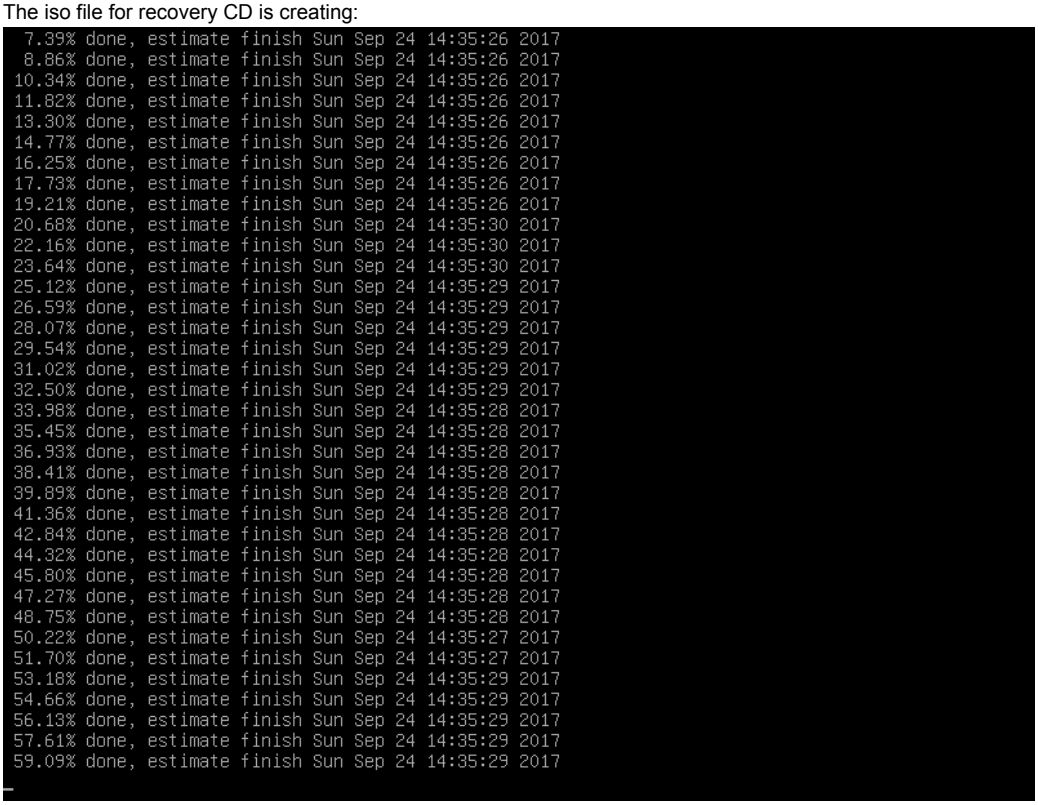
Clonezilla will list the command to create such a iso file:



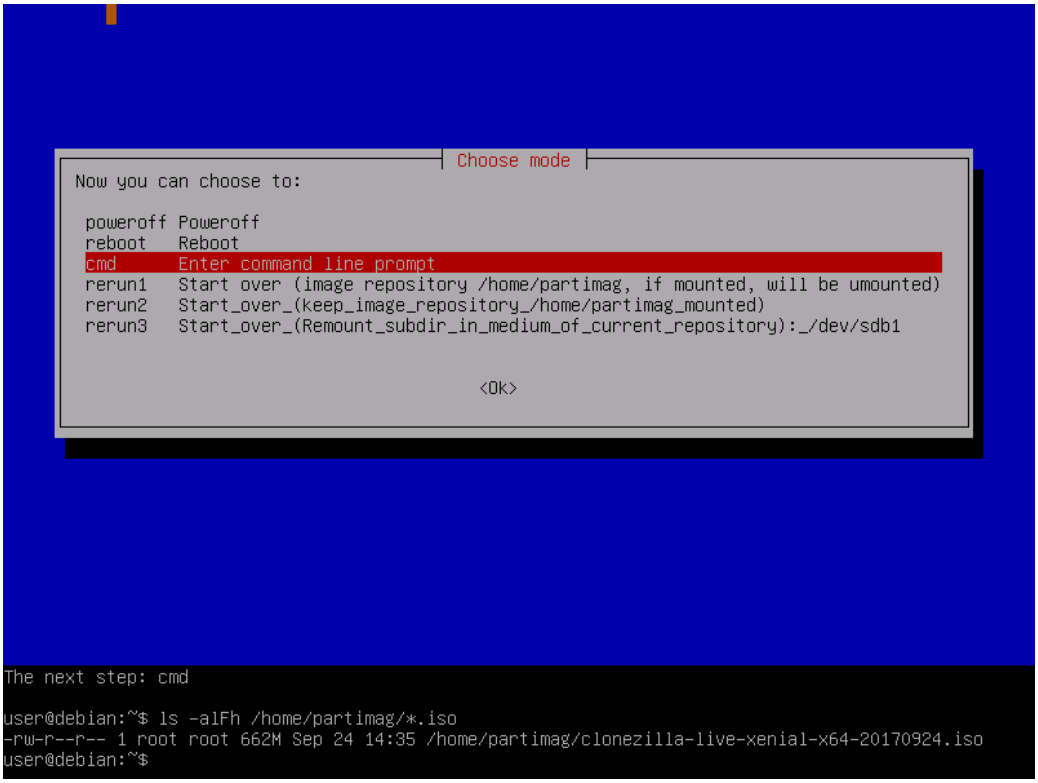
It now asks if you really want to create such a iso file:



The iso file for recovery CD is creating:



Once it's done, the created iso file is in the dir /home/partimag:



That's all. You can copy (or use network tool to copy, e.g. scp, lftp, to copy the file to another machine. If you need to config the network, run: "sudo -i; ocs-live-netcfg" to config the network.) the create iso file to the machine running with a CD burner. Then you can use burning tool to burn the iso image to CD or DVD. If you want to create a recovery USB flash drive, choose to create zip file, then follow the same method as creating USB flash drive version of Clonezilla live to put the created zip file on USB flash drive and make it bootable.

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