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Clonezilla

The Free and Open Source Software for Disk Imaging and Cloning

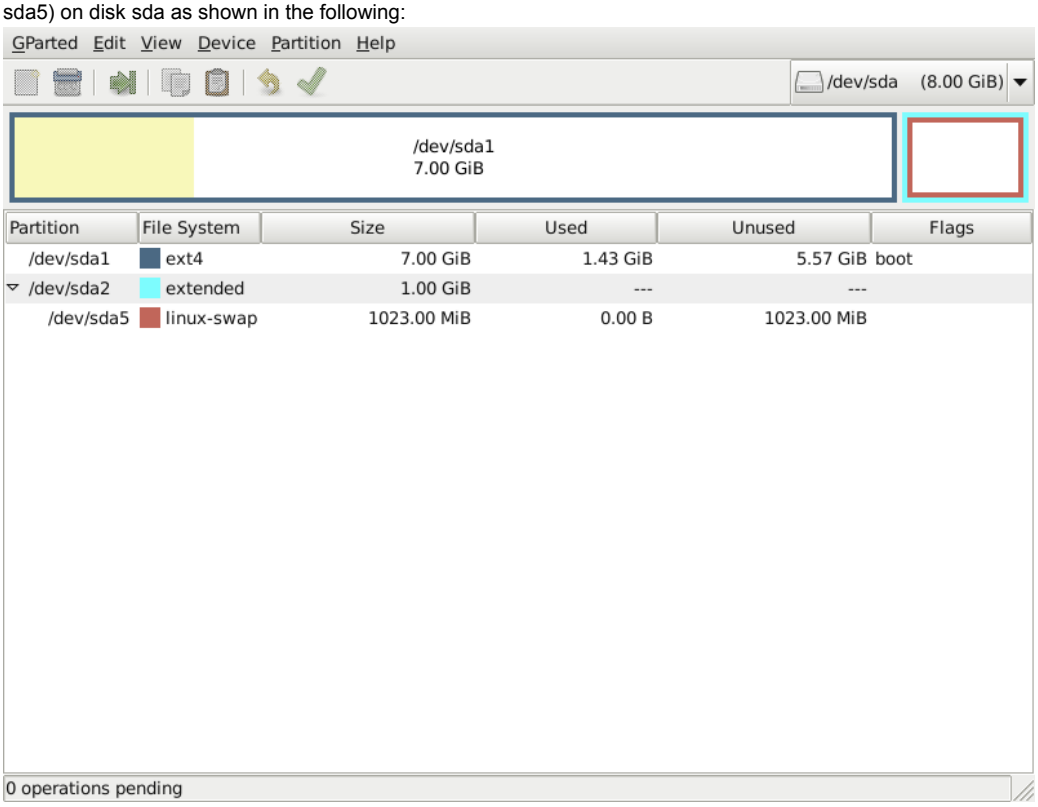
Save disk image

In this example: Save 1st disk (sda) as an image on 2nd disk (sdb) (Step by step)

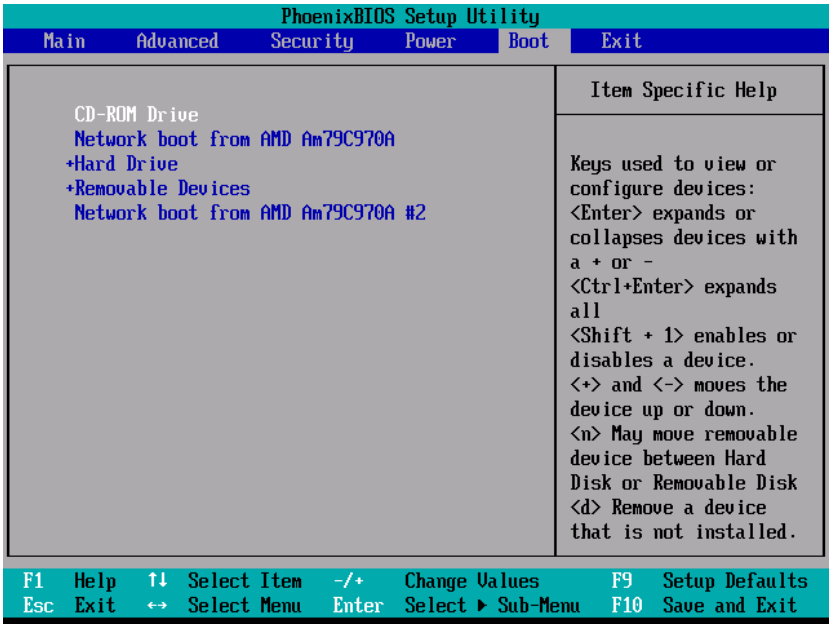
[Back to 'Clonezilla Live Doc']

- 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. The size of disk sda is 8 GB with Ubuntu Xenial (16.04) installed. There are 2 partitons (sda1, sda2, sda5) on disk sda as shown in the following:



  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:

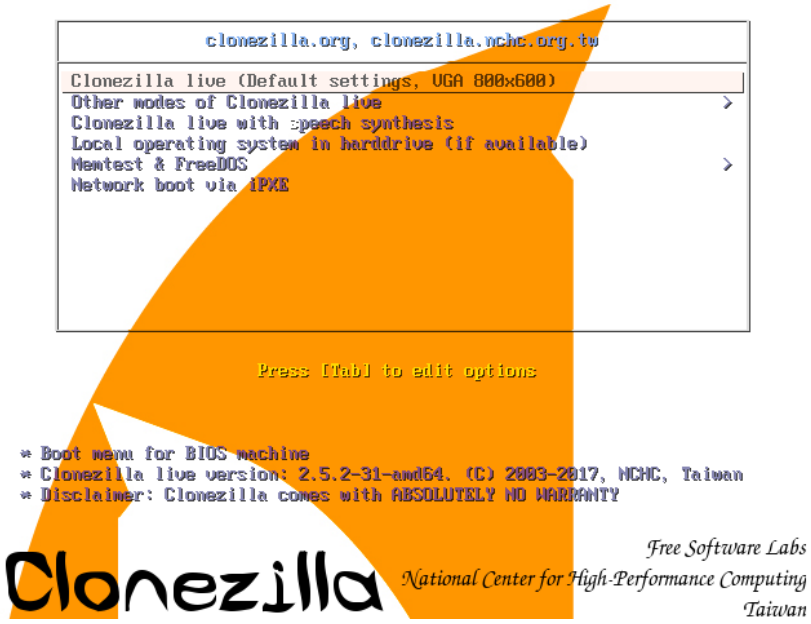


Or by pressing a hotkey (e.g. Esc, F9 or maybe F12) when you boot the machine, you will see the boot menu of BIOS like this:

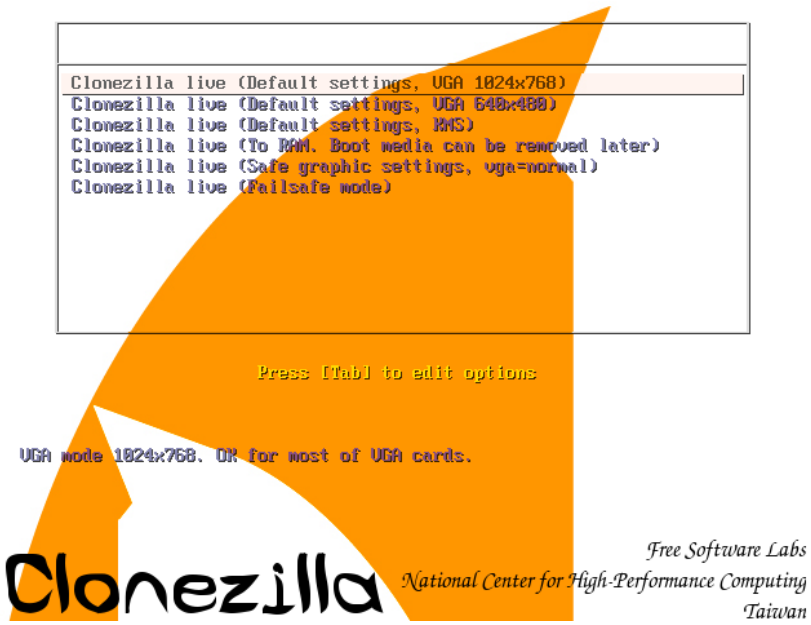
Check your motherboard manual for more details about how to boot your machine via CD.

- The boot menu of Clonezilla live ^TOP^

  Here is a screenshot of Clonezilla Live boot menu:



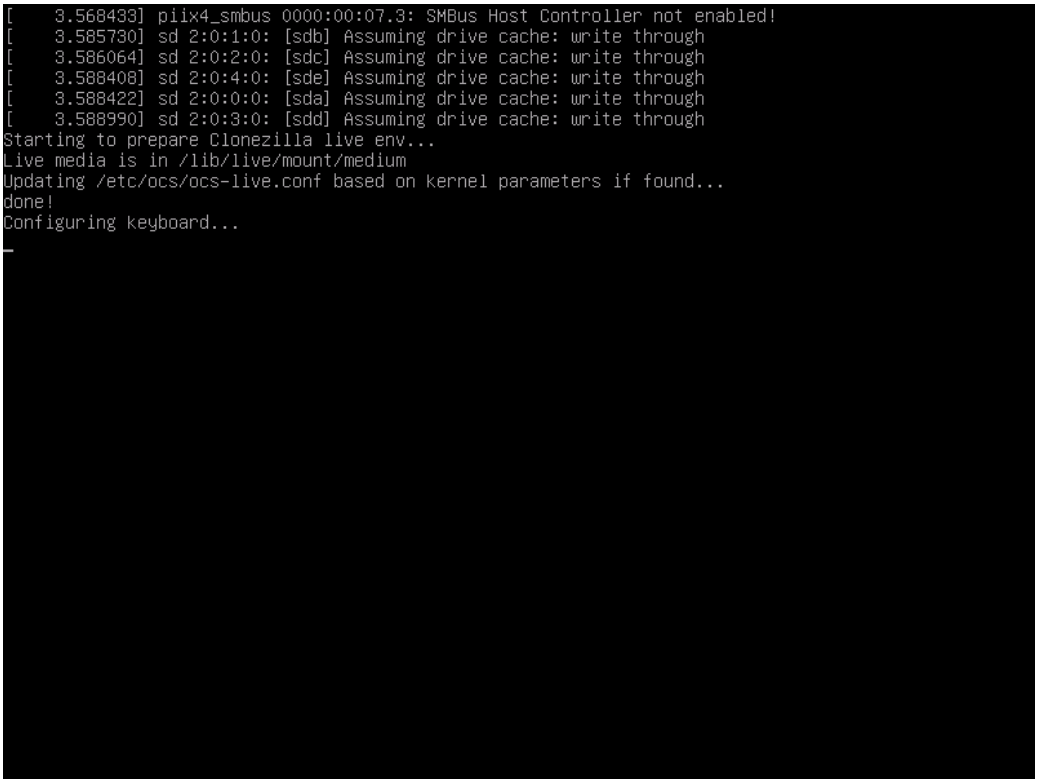
The first one is the default mode for Clonezilla Live. It will default to framebuffer mode with a resolution of 800x600.
There are more modes which you can choose in the 2nd choice "Other modes of Clonezilla live", e.g. 1024X768 or 640x480 one if you want, as shown here:



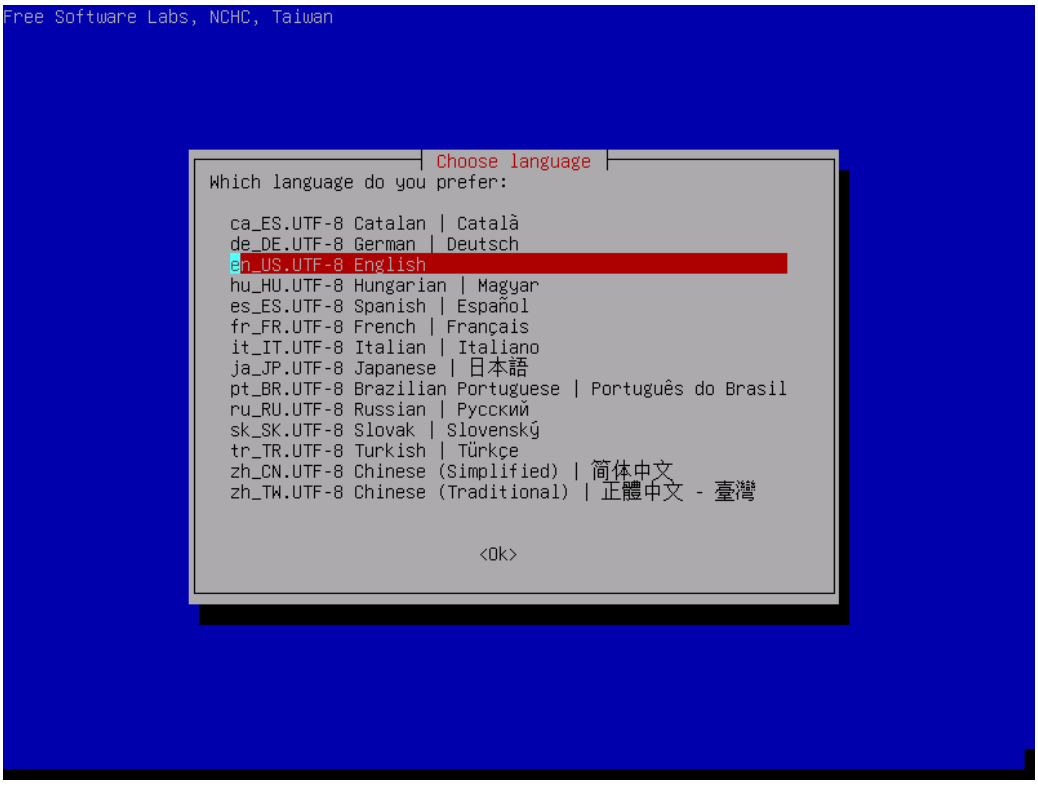
The choice, "Default settings, KMS" is for you to use KMS (Kernel Mode Setting) for your graphics card. If you have some problem to use the framebuffer mode of your graphics card, you can try it.
The choice, "Clonezilla live (To RAM. Boot media can be removed later)", is the same function with the 1st 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 iPXE" is used to perform a network boot via iPXE. 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.

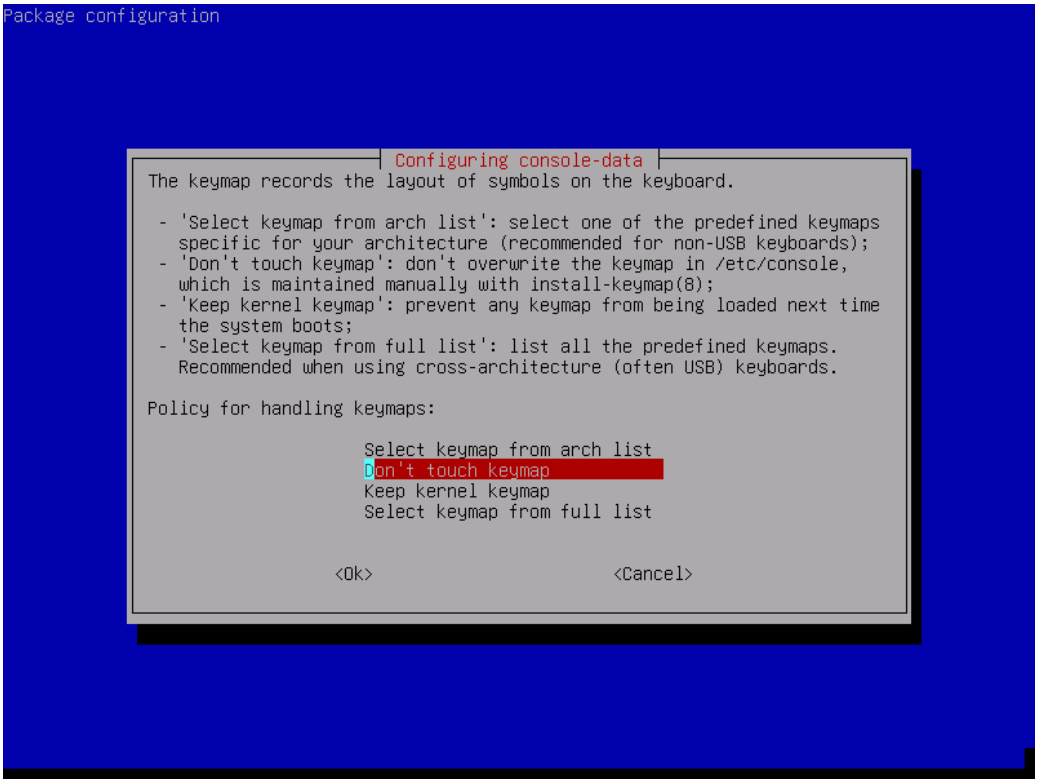
- Here we choose 800x600 mode, after pressing Enter, you will see Debian Linux booting process ^TOP^



- Choose language ^TOP^

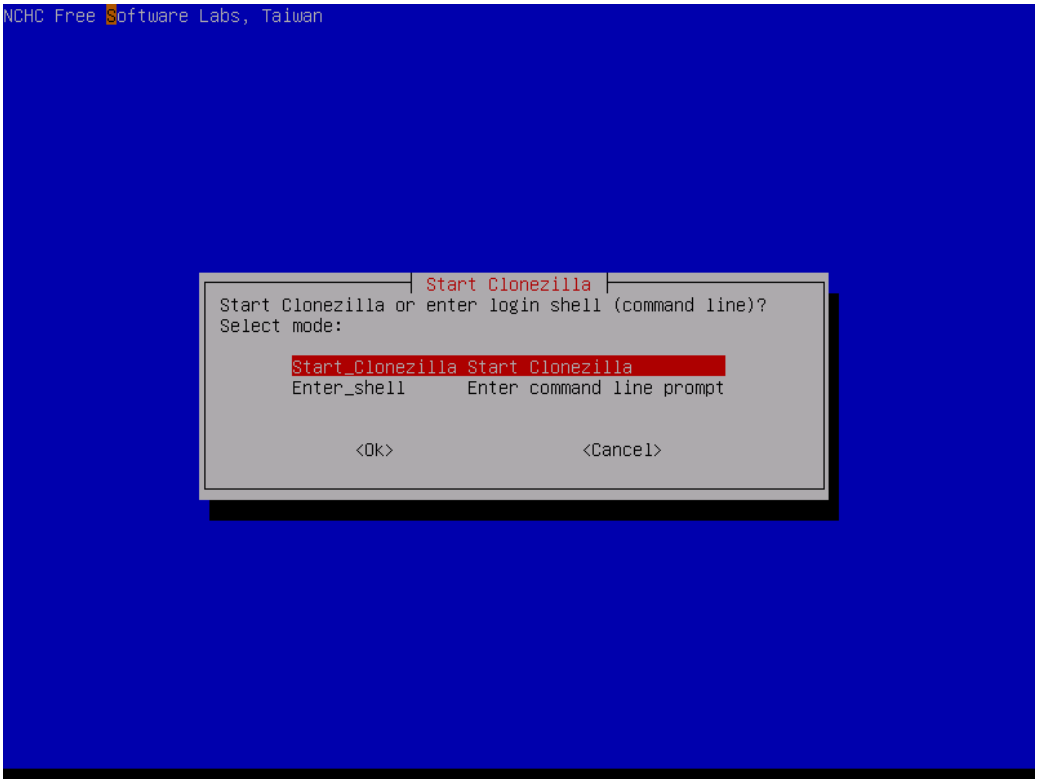


- Choose keyboard layout ^TOP^

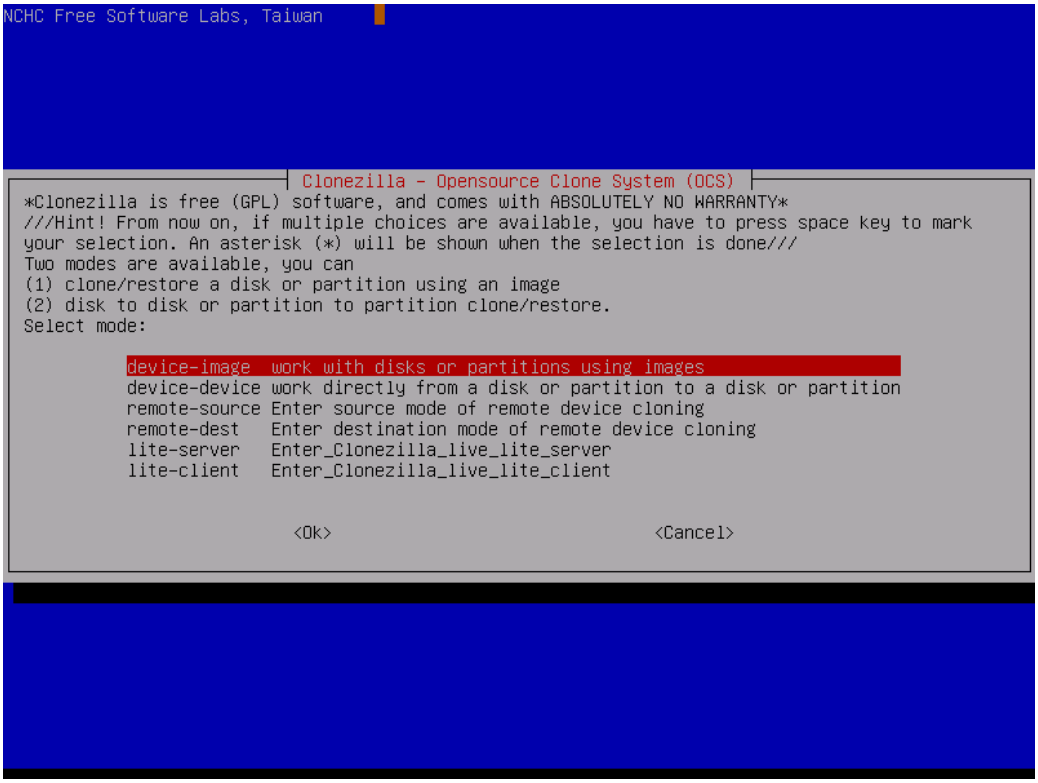


The default keyboard layout is US keybaord, therefore if you are using US keyboard, just press enter (i.e. use the option "Don't touch keymap").
If you want to change keymap, you can either choose "Select keymap from arch list" or "Select keymap from full list".
///NOTE/// There is a bug when choosing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

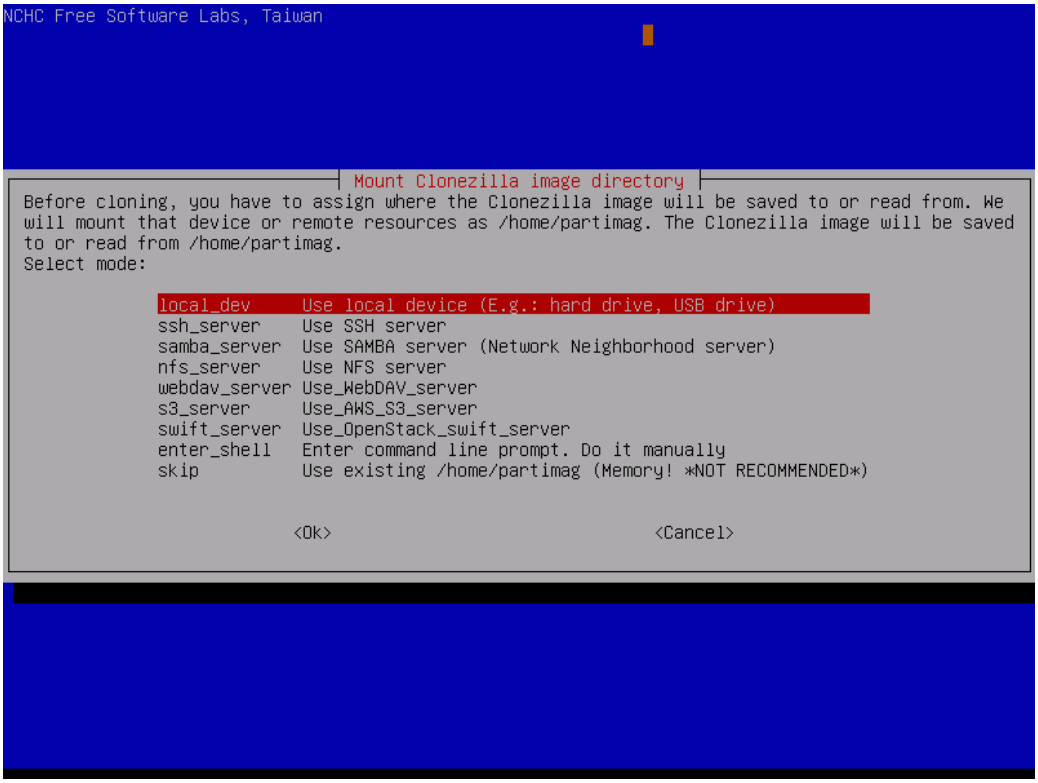


- Choose "device-image" option ^TOP^



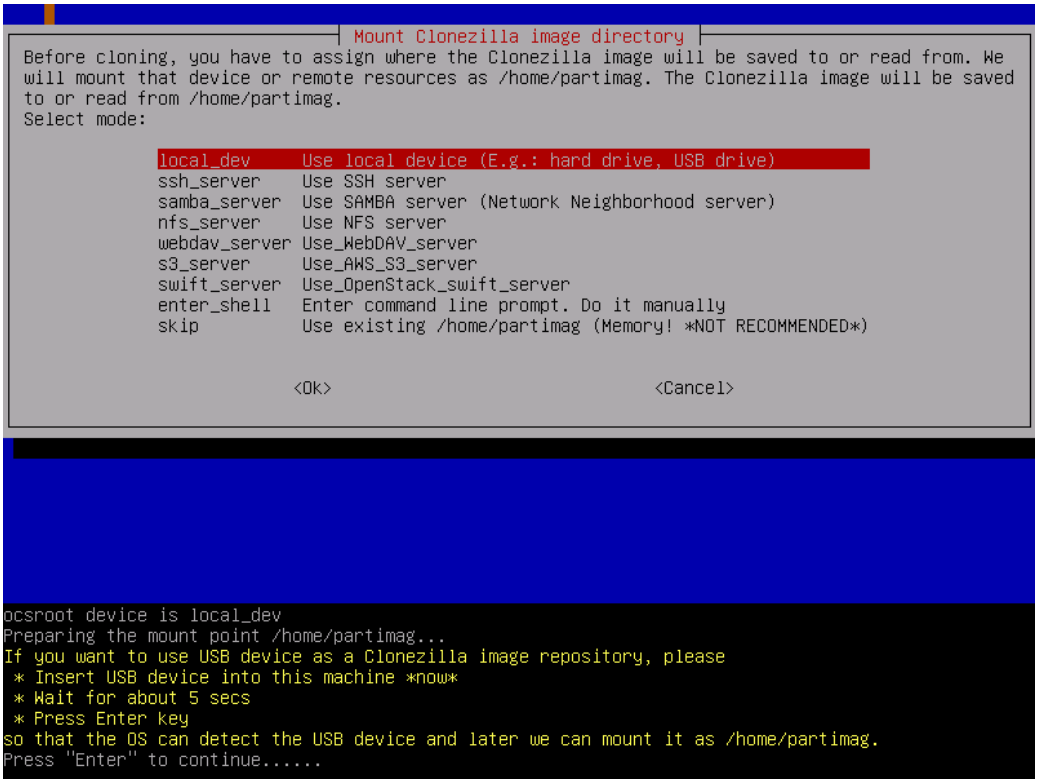
Pay attention to the hints, too. You might need that:
///Hint! From now on, if multiple choices are available, you have to press space key to mark your selection. A star sign (*) will be shown when the selection is done///

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

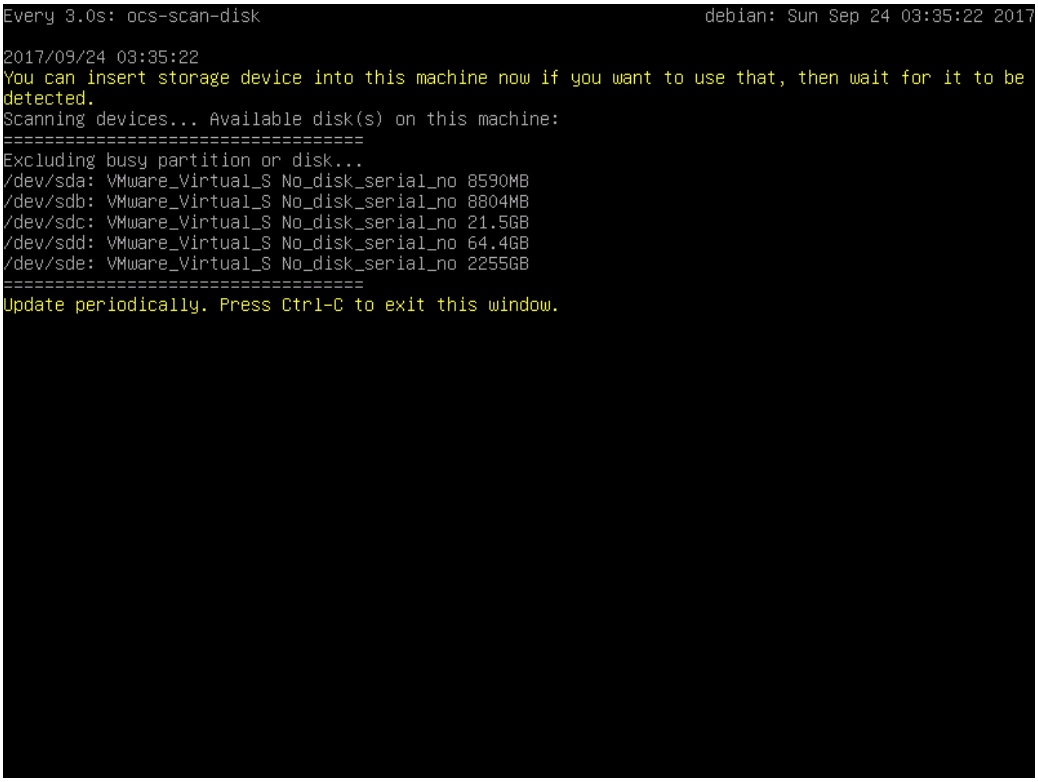


There are other options, e.g. sshfs, samba, nfs or webdav, AWS S3 or Openstack Swift 

, 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, insert USB flash drive and wait a few secs.

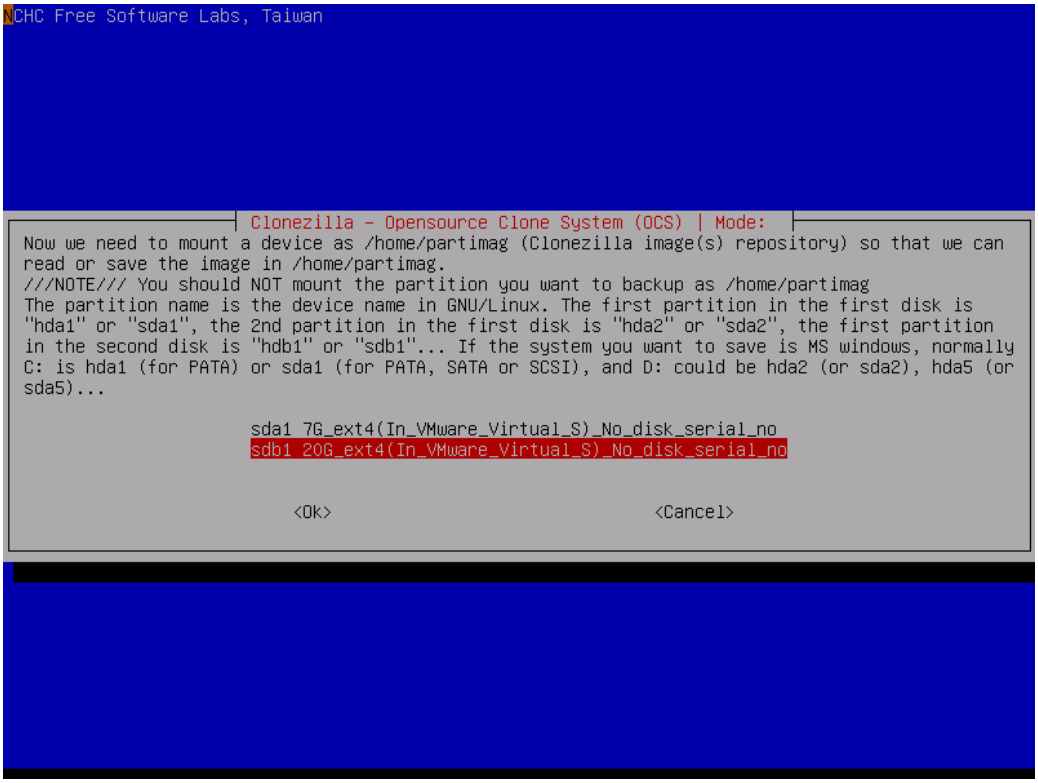


Clonezilla will scan the disks on the machine in every few secs, and show you the results:

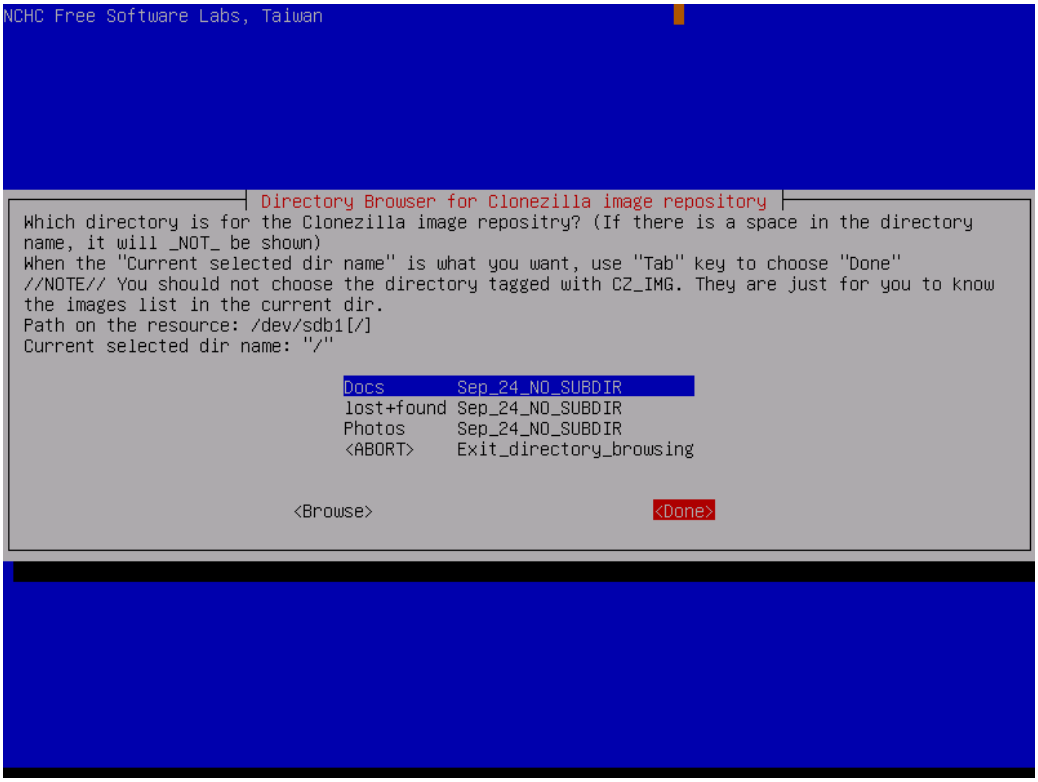


Once you see the device you have inserted shown on the status, you have to press Ctrl-C to quit the scanning report.

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

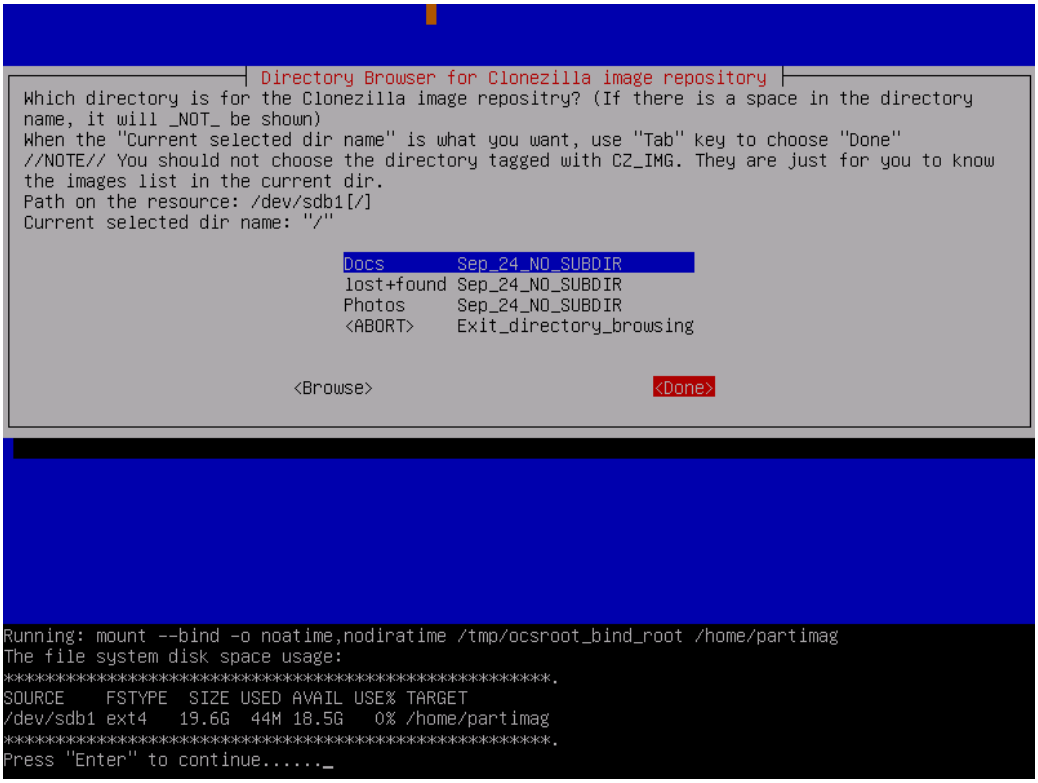


Choose the directory name on /dev/sdb1 as the image repository. Here we put image on the top directory (i.e., Current selected dir name is "/"):

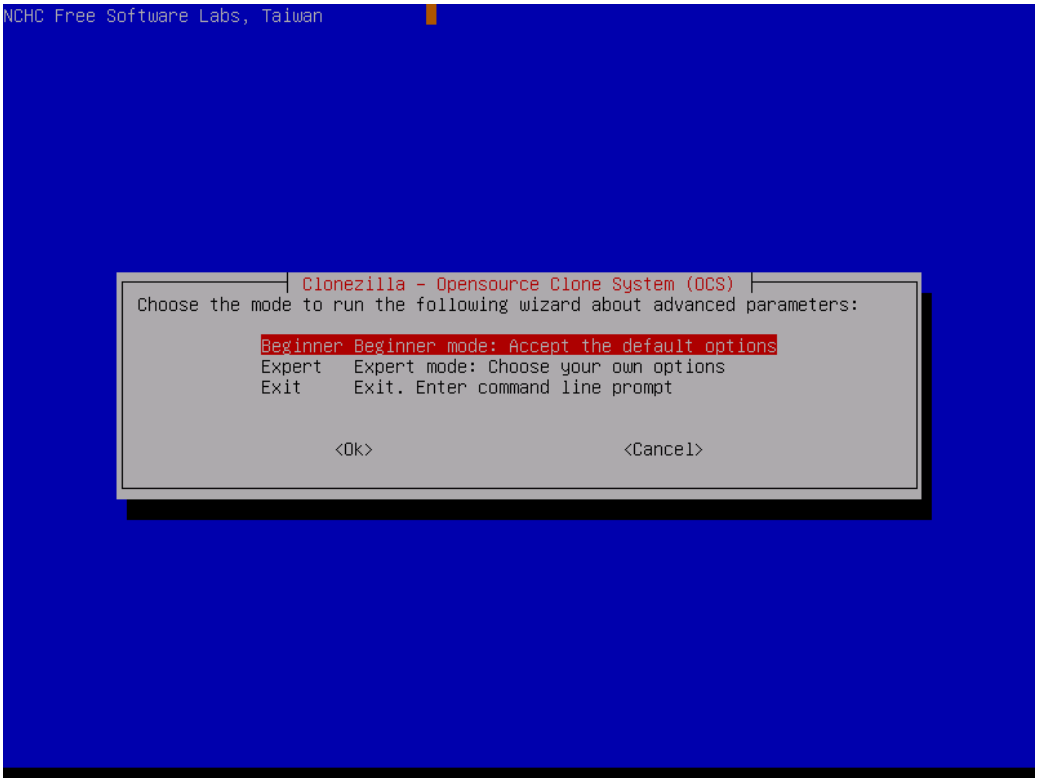


If you are not familiar with the disk or partition name in GNU/Linux, read the hints:
'The partition name is the device name in GNU/Linux. The first partition in the first disk is "sda1", the 2nd partition in the first disk is "sda2", the first partition in the second disk is "sdb1" or "sdb1"... If the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

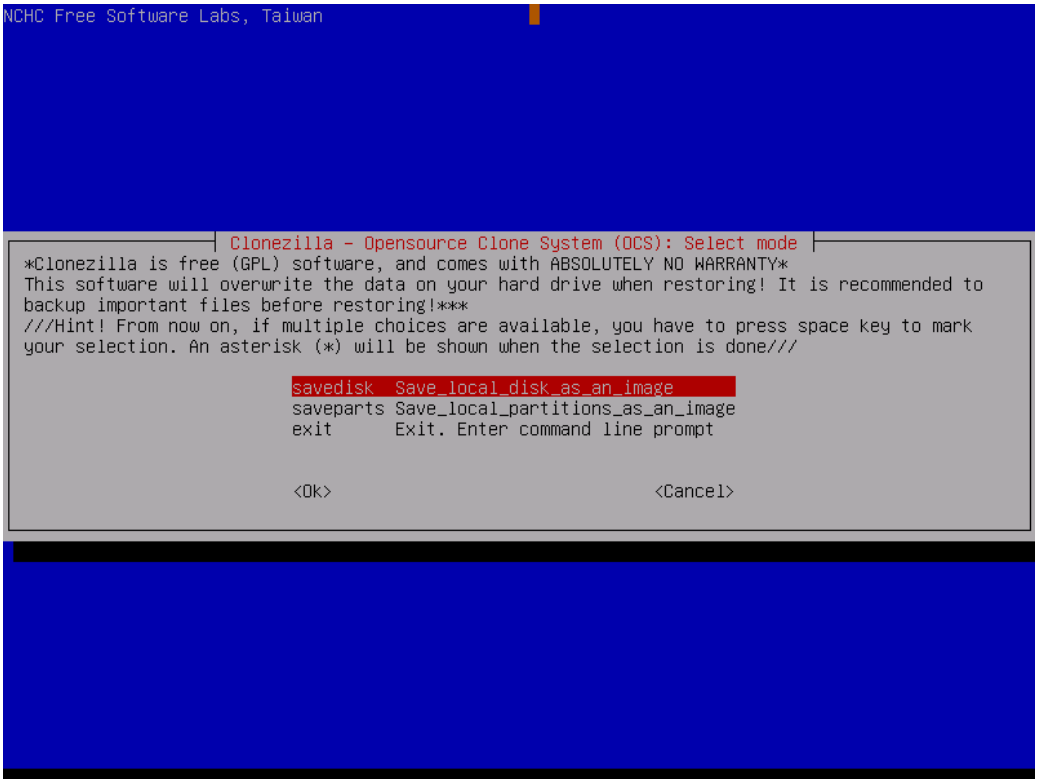
Then Clonezilla shows you the disk usage report:



Here we choose "Beginner" mode:



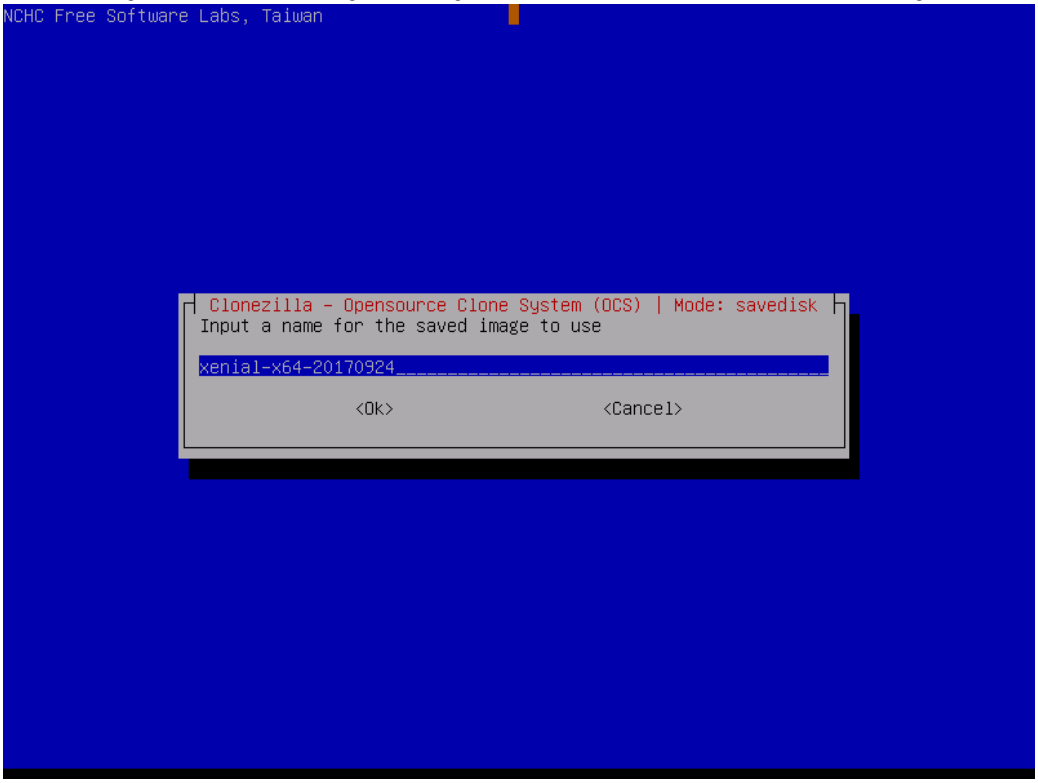
Now we can select "savedisk" option:



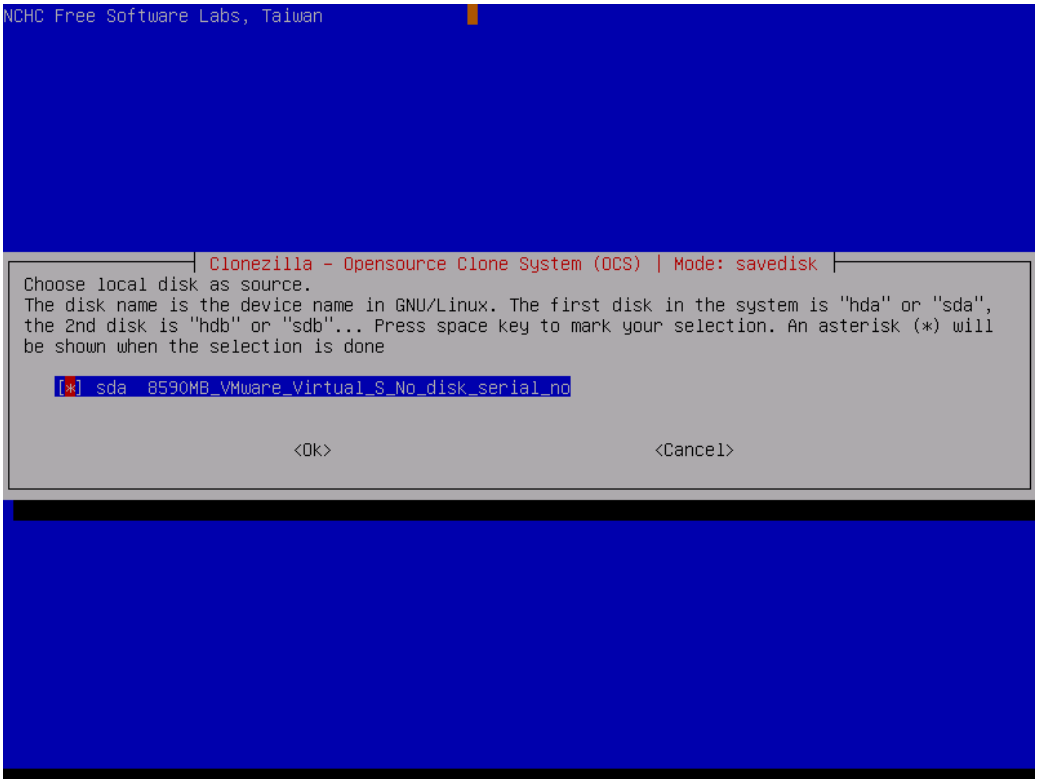
If you choose "Expert" mode, you will have some chances to choose advanced parameters, e.g. imaging program, compression program, etc.. You can see more details here.

- Input image name and select source disk ^TOP^

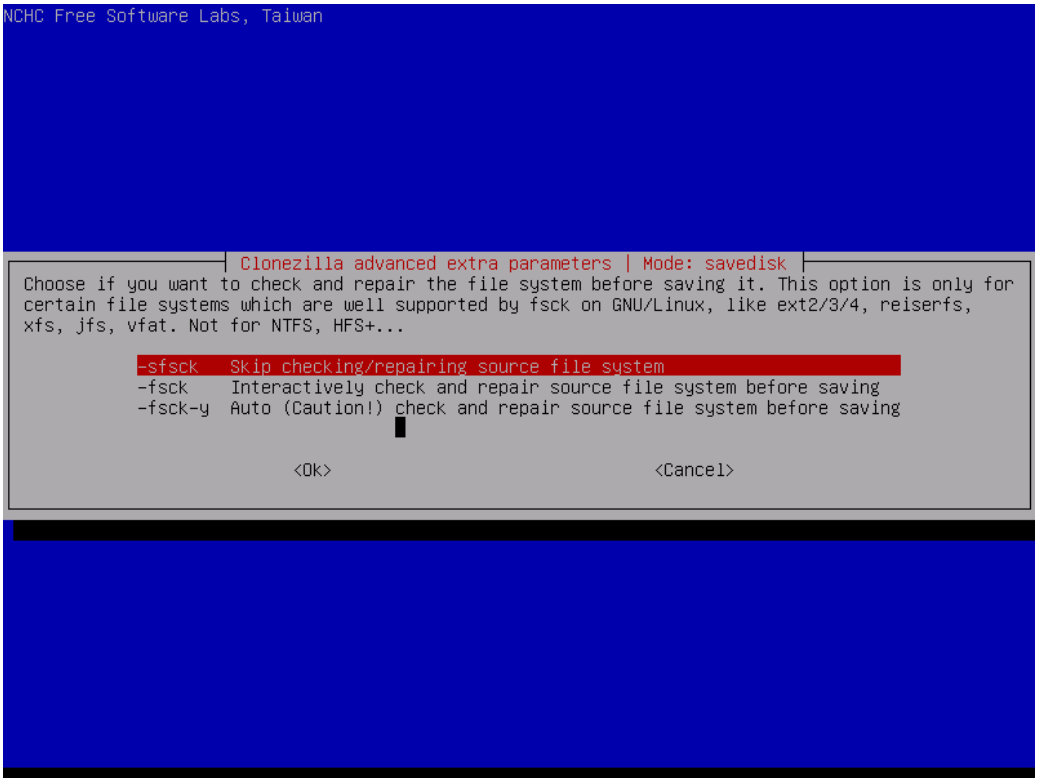
Enter the image name, Clonezilla will give an image name based on date and time, feel free to change it



Select the source disk "sda" we want to save:

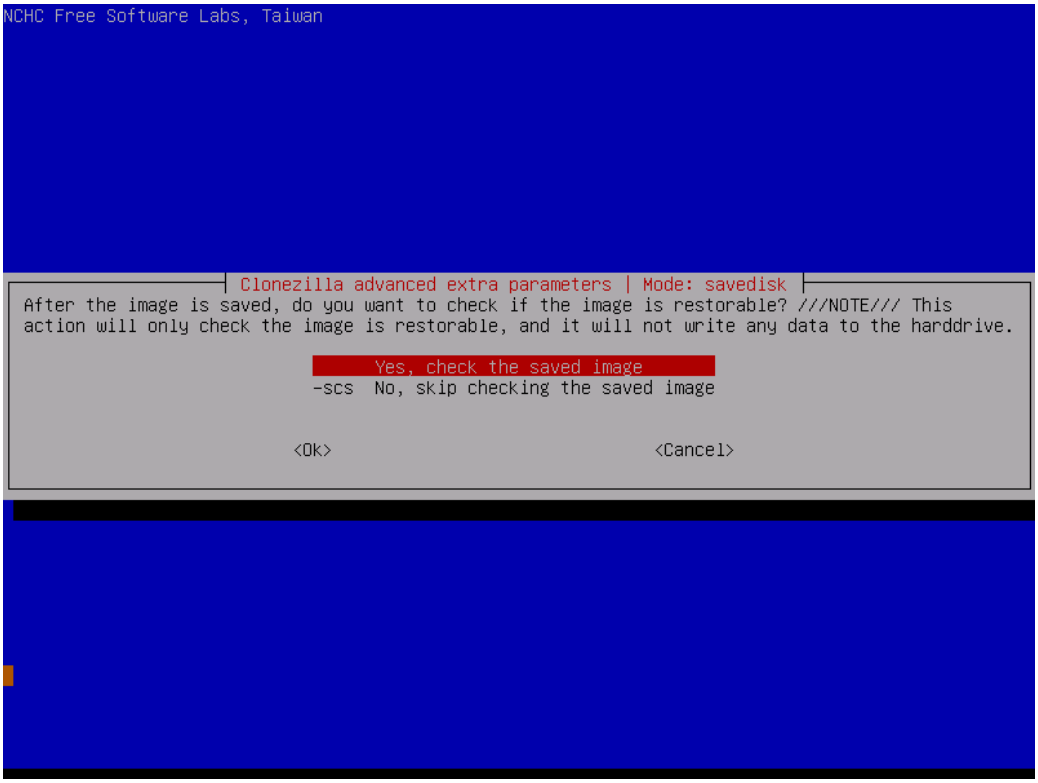


Select if the source file system need to be checked or not:



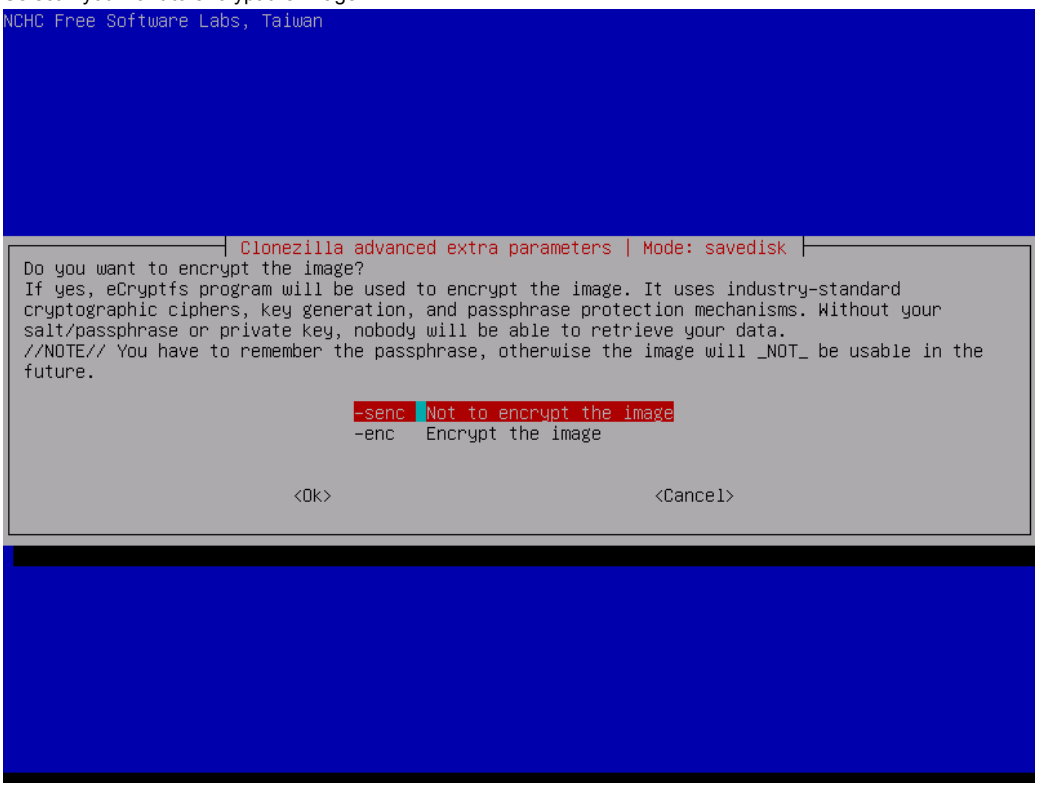
Here we skip the file system check. However, if you are not sure if the source file system is clean, it's recommended to do such a check.

Select if you want to check the saved image:



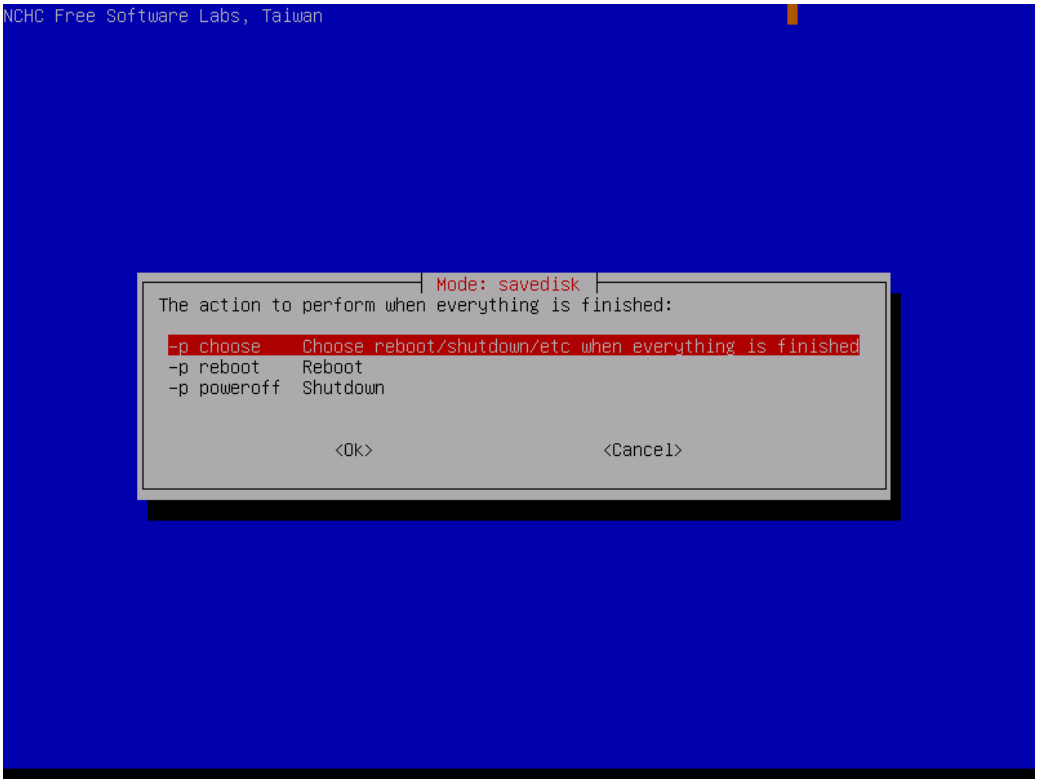
By default this will be done. It's recommended to do such a check.

Select if you want to encrypt the image: NEW



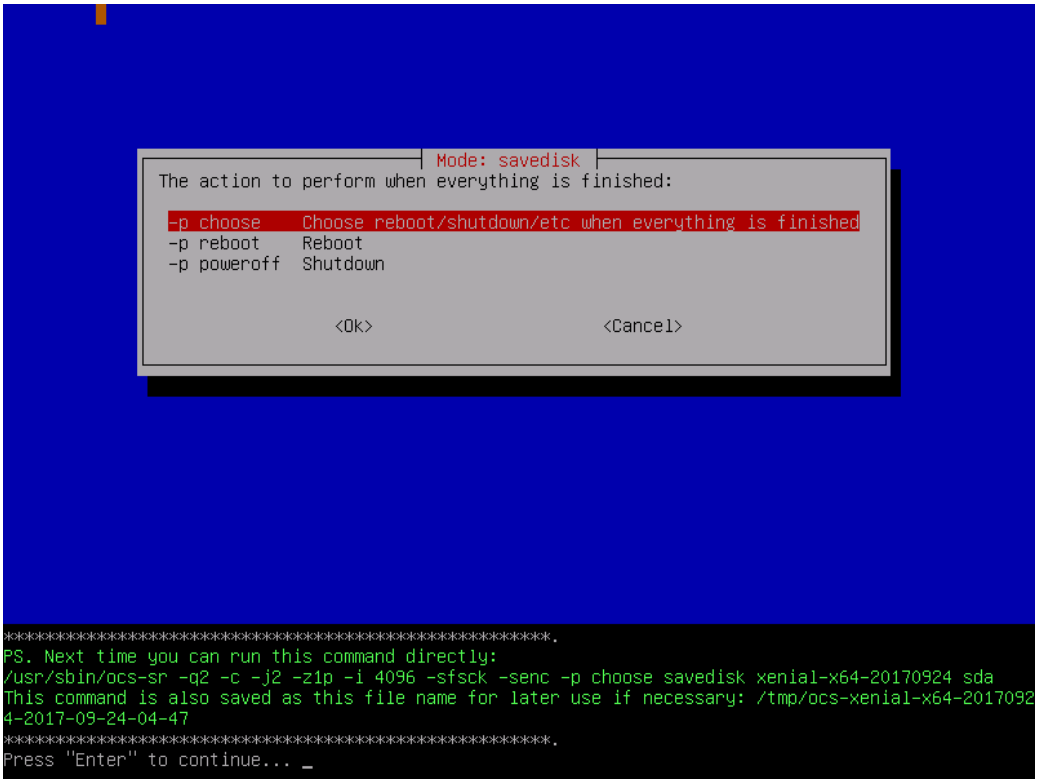
By default the image won't be encrypted. If you want to encrypt the image, it will prompt you to enter a passphrase for the image. //NOTE// You have to remember the passphrase otherwise the image will _NOT_ be useable in the future. There is no back door to decrypt the image.

Select the mode you want after the image saving is done:

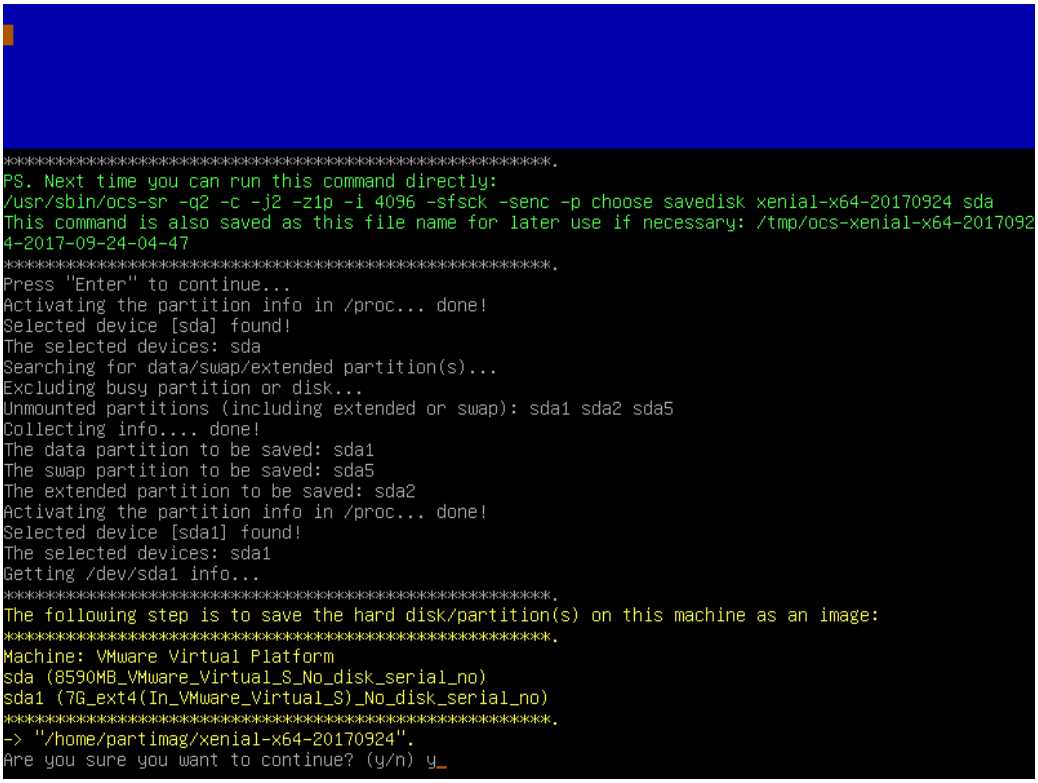


By default we will choose later, but if you have decided, you can choose to reboot or poweroff the machine.

Clonezilla will prompt us the command to save the image. This command is very useful when you want to create a customized Clonezilla live:

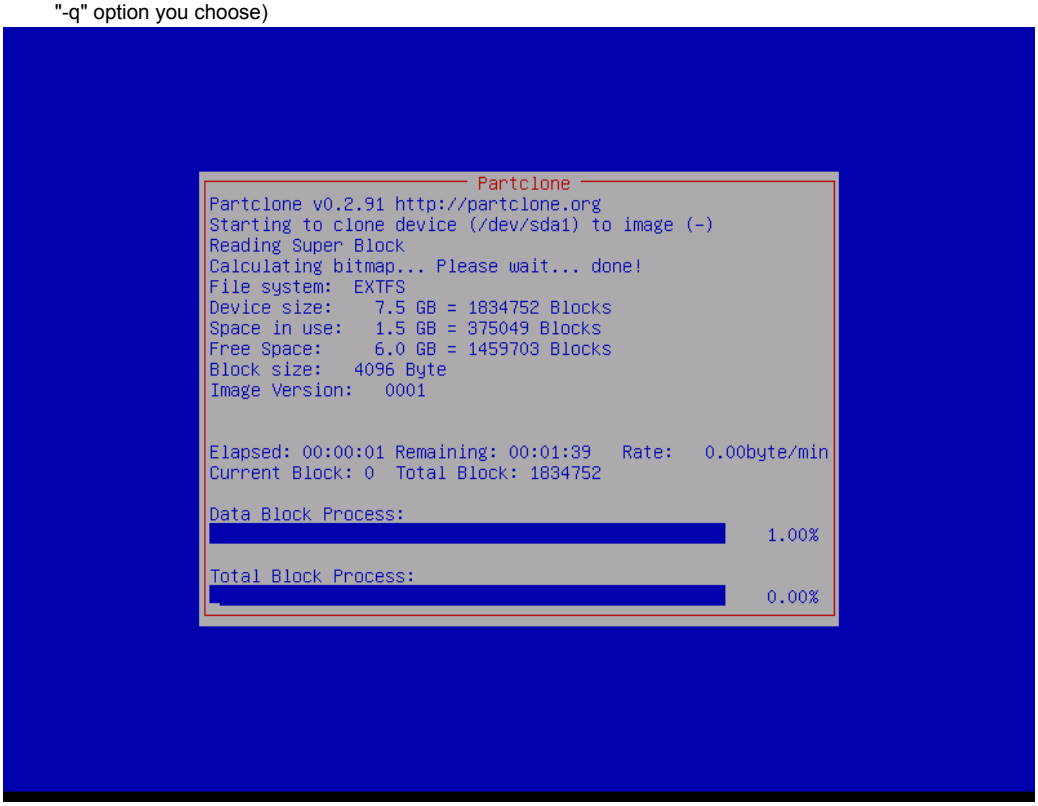


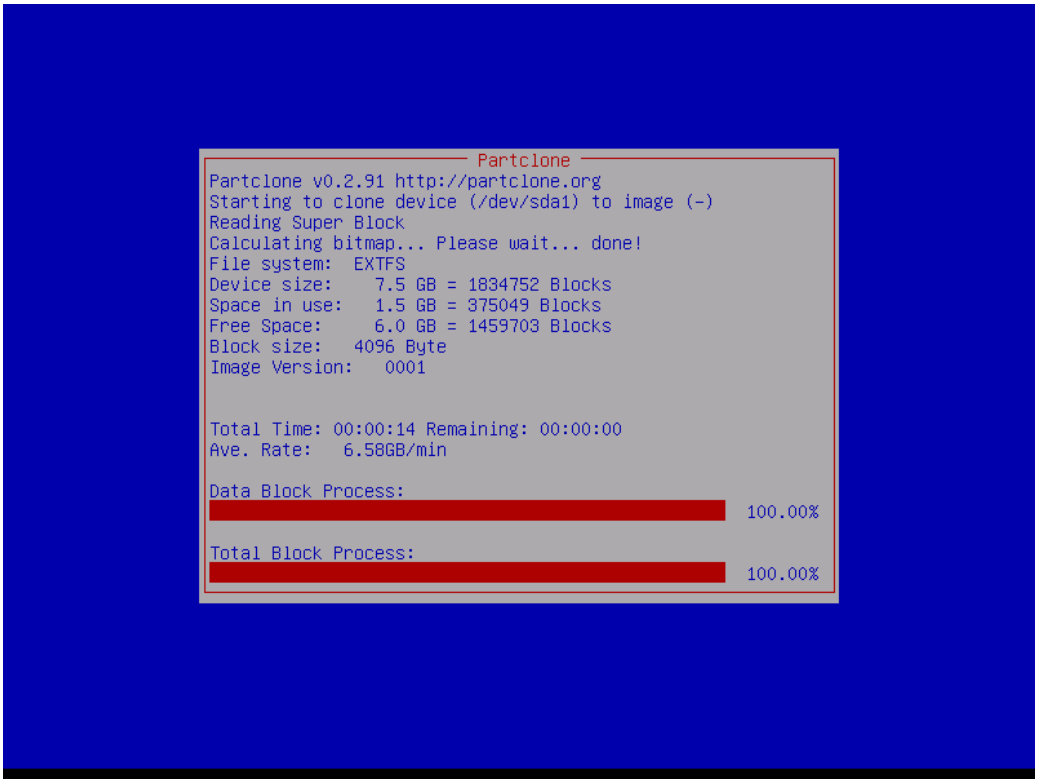
Before starting to save the disk image, we still have a chance to say yes or no:



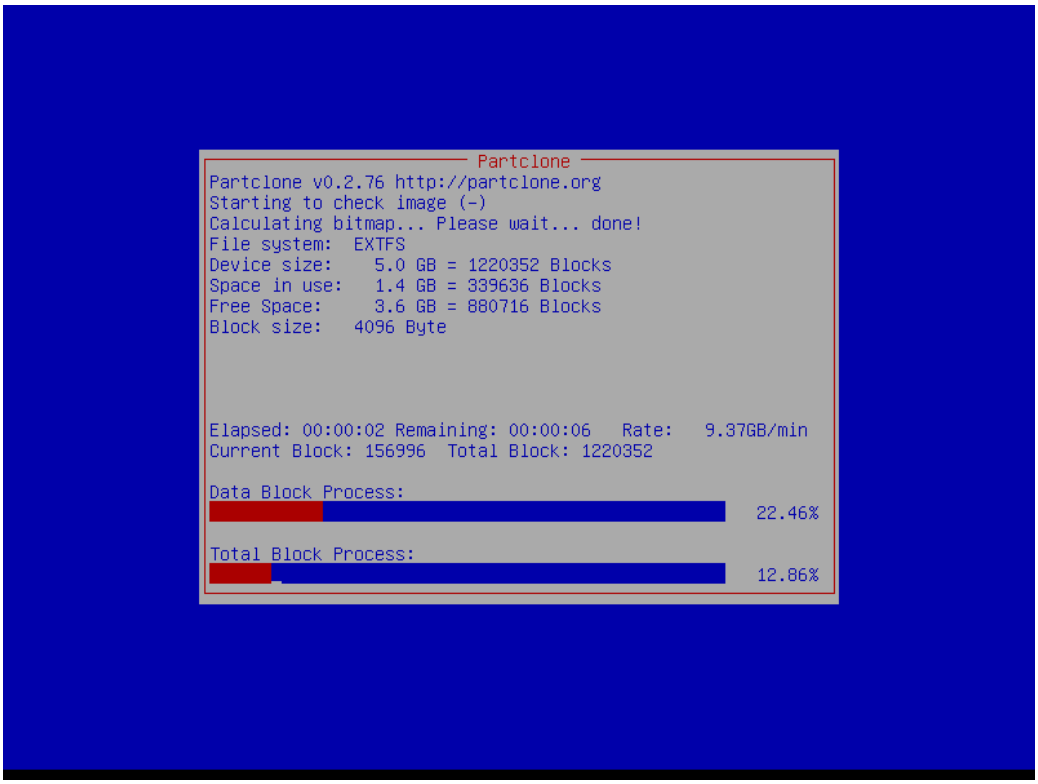
- Clonezilla is saving disk image (sda) to the partition of 2nd disk (sdb1) ^TOP^

  Clonezilla now is saving disk sda as an image. The job is done by saving:
  - MBR (by dd)
  - Partition table (by sfdisk and parted), CHS of disk.
  - Data on every partition or LV (logical volume) (by partimage, ntfsclone, partclone or dd. It depends on the "-q" option you choose)



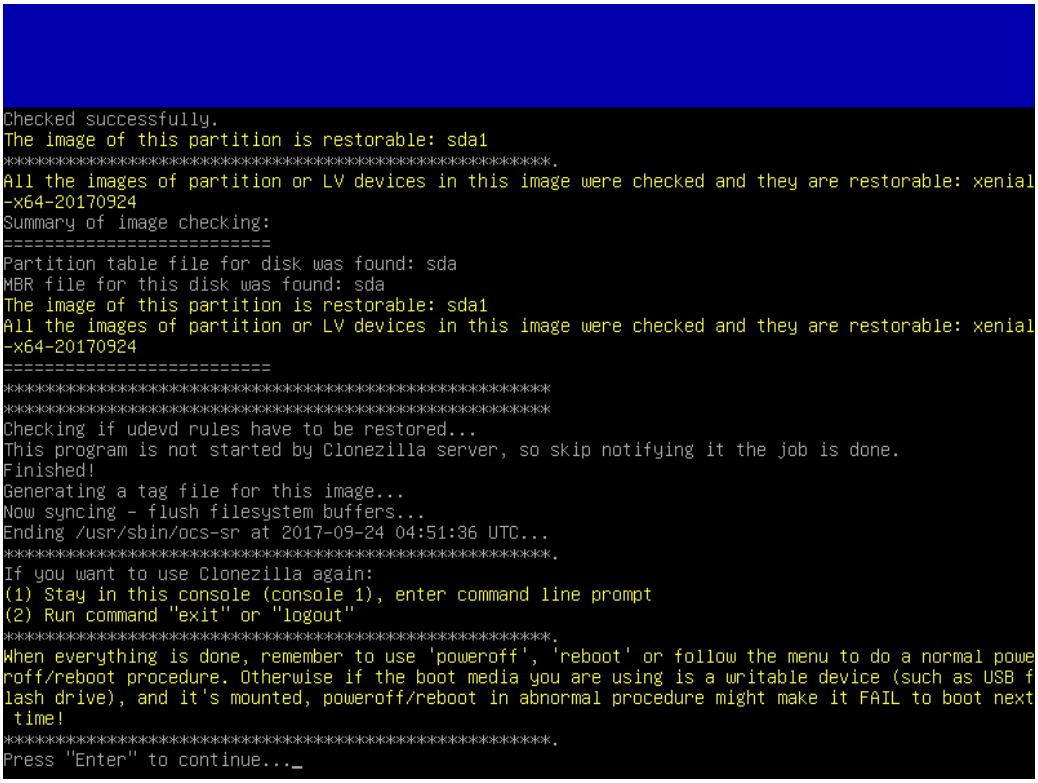


Once the image is saved, since we have choosed to check the saved image, Clonezilla will do such a check:



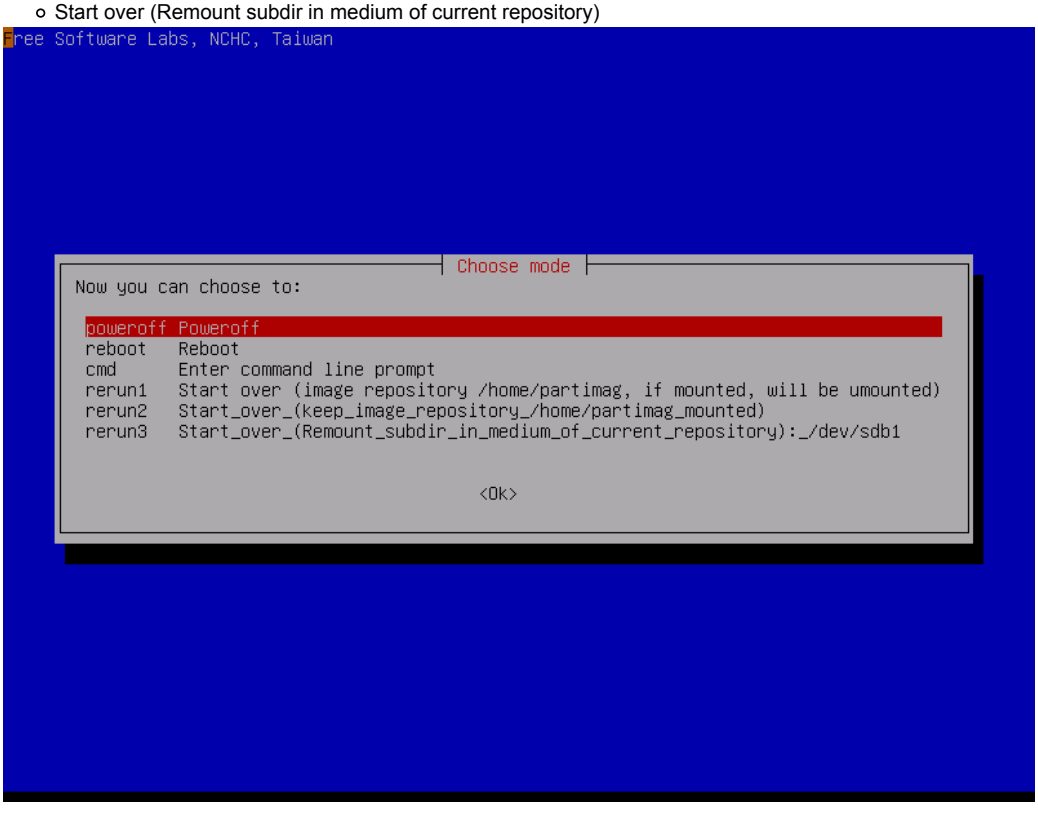
When everything is done, Clonezilla will prompt you if you want to run it again (when something goes wrong or you want to choose different options),

1. 'Stay in this console (console 1), enter command line prompt'
2. 'Run command "exit" or "logout"'

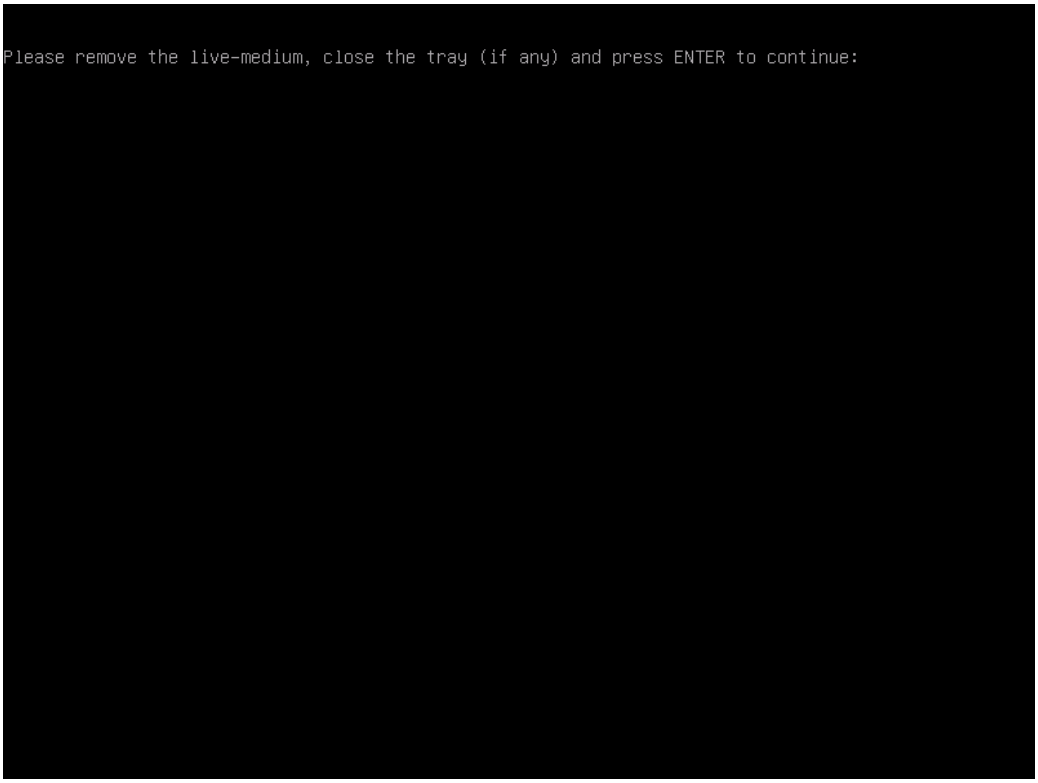


Then you can choose to:

- Poweroff
- Reboot
- Enter command line prompt
- Start over (image repository /home/partimag, if mounted, will be umounted)
- Start over (keep image repository /home/partimag mounted)
- Start over (Remount subdir in medium of current repository)



Here we choose Poweroff, then when the shutdown process is done, it will ask you to remove the disk and close the try (if any) then press ENTER if you boot Clonezilla live from CD. If you boot Clonezilla live from USB flash drive, then there is no such prompt.



That's all. We have successfully saved disk image (sda) on 2nd disk (sdb1). The image on the 2nd disk is a directory with name "xenial-x64-20170924" and its contents are:

```
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

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
```

[Back to 'Clonezilla Live Doc']