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Core Technologies

CAE
Clonezilla Live Manual

Revision History

Date	Section	Comment	Name	Revision
06/05/2016		Initial release	Emil Hristov	1.0
05/10/2016		Added Requirements section	Emil Hristov	1.1

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Requirements

This document describes how to create Clonezilla Live bootable USB drive which can be used to do Disk-to-Disk (clone), Disk-to-Image (backup) and Image-to-Disk (restore) backup/restore operations.

1. Clonezilla SPL asset

Download the Clonezilla asset from SPL to your PC:
https://spl.cae.com/buildfarm/assets/details/clonezilla

2. USB drive

The USB key MUST be at least 1 GB or more.
The content of the USB drive will be overwritten.

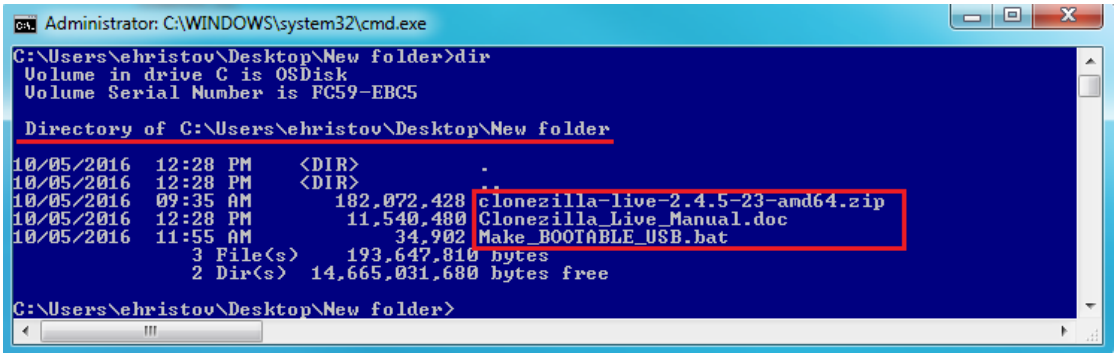
3. Backup (repository) disk

For Disk-to-Disk (clone) operation the backup disk MUST be strictly the same size as the disk intended to be cloned (Disk-to-Disk). The content of the backup disk will be overwritten.

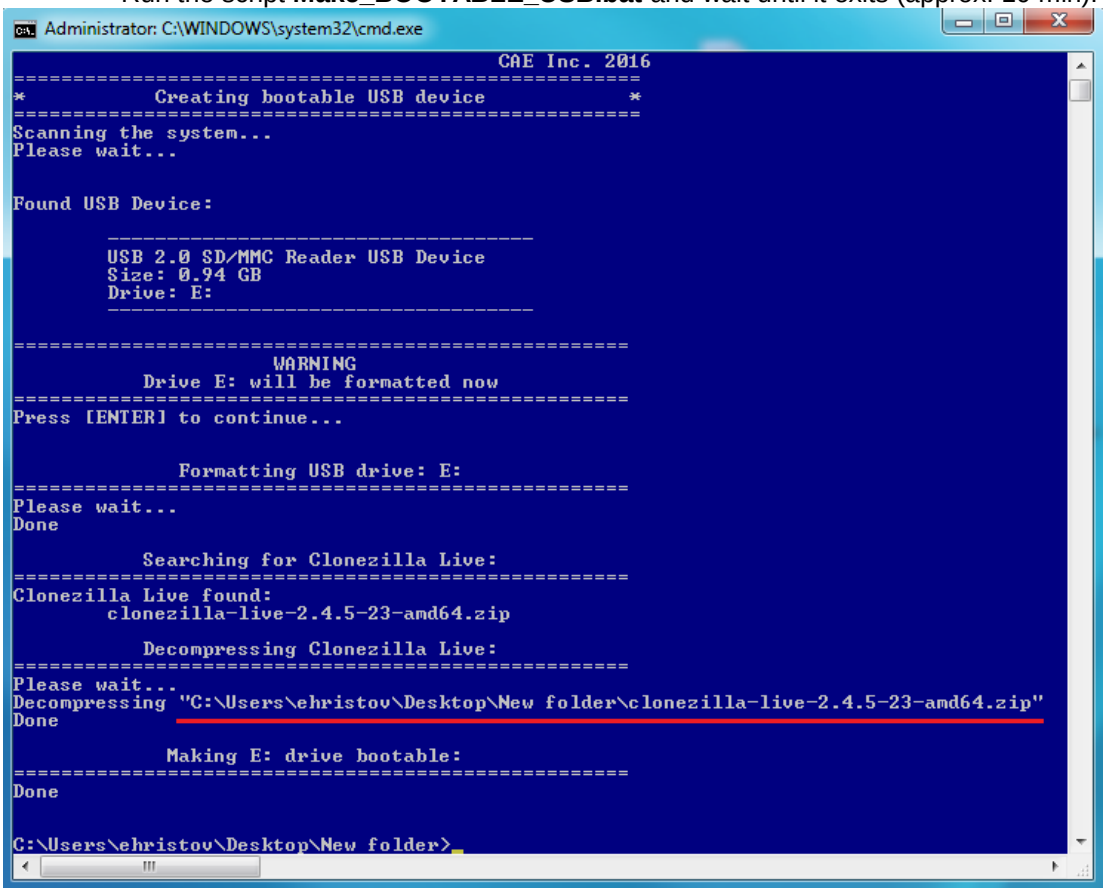
Part I Create Clonezilla Live bootable USB

Remove all USB devices that are connected to your PC except the one you want to use as Clonezilla Live boot USB.

Make sure **clonezilla-live-2.4.5-23-amd64.zip** and **Make_BOOTABLE_USB.bat** are in the same folder:



Run the script **Make_BOOTABLE_USB.bat** and wait until it exits (approx. 10 min):



Clonezilla Live bootable USB flash drive is ready.

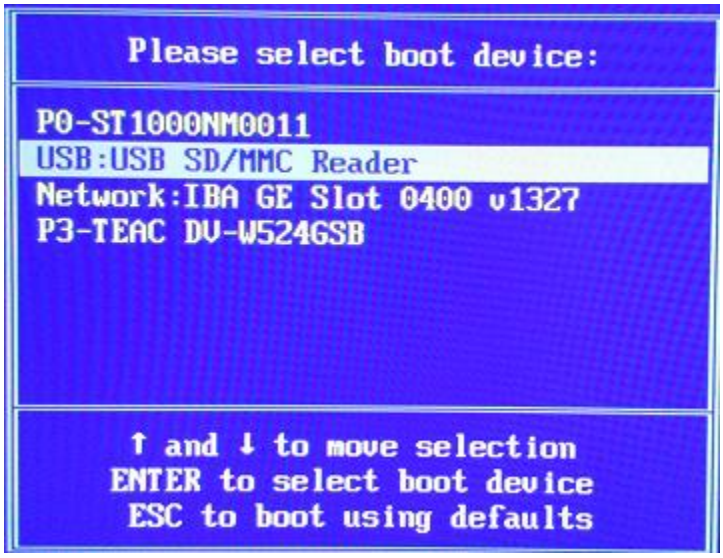
Part II Get the original disk serial number

IMPORTANT:

Common fatal mistake when preforming backup/restore operations is to select the wrong disk to be cloned/backed-up/restored. To avoid such a catastrophic mistake, you need to be able to recognize which disk is to be cloned/backed-up/restored and which disk is the backup disk. Knowing the unique serial number of the original disk is the key point for distinguishing the disks during the clone/backup/restore process.

1. Power off the PC
2. Unplug all internal and external disks (including USB disks) EXCEPT the disk you want to clone/backup/restore.
3. Power on the PC
4. Boot the PC from Clonezilla Live bootable USB

   Pressing a hotkey (**F11** for CK2, **F6** for CK3) right after power on the PC will bring up the BIOS boot menu.
   Select the USB drive media and press **Enter**:

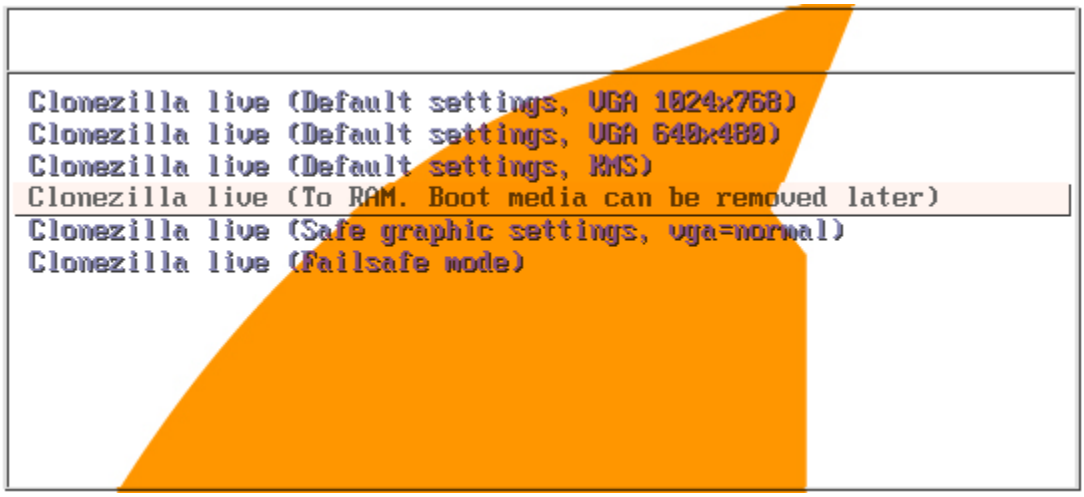


Note:
Hotkey may differ on different machines. Refer to the BIOS option for appropriate hotkey

5. Clonezilla Live boot menu

Select ***Other modes of Clonezilla live*** and press **Enter**:

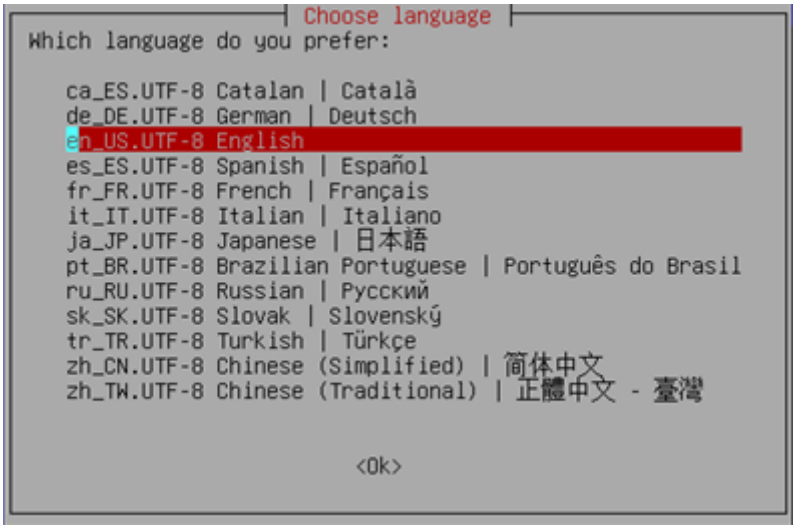
Select ***Clonezilla live (To RAM. Boot media can be removed later)*** and press **Enter**:



This mode will boot Clonezilla with framebuffer set to 800x600 and run all the necessary files from RAM. Therefore, you can remove the boot media (USB flash drive) when loaded.

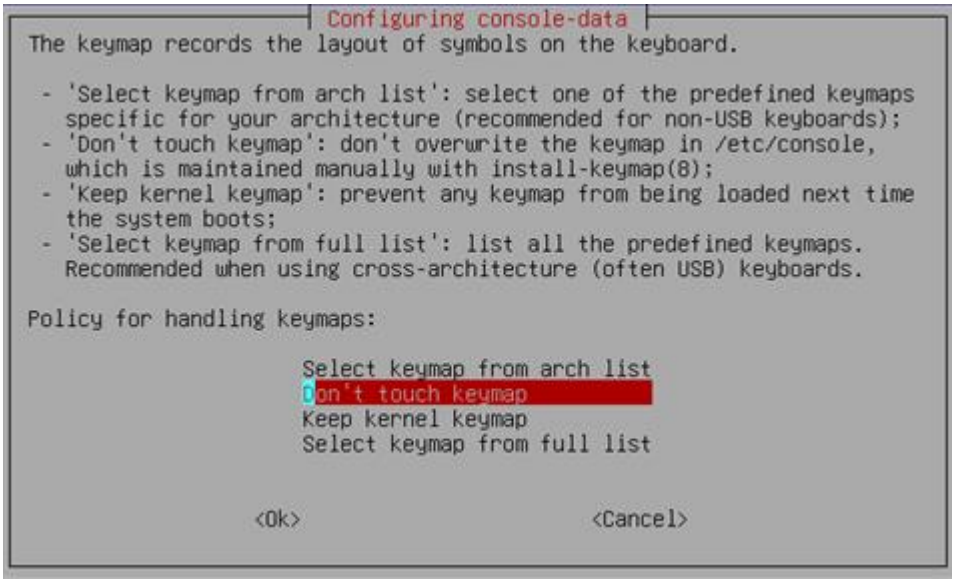
6. Language

Remove Clonezilla Live USB (USB flash drive) – Clonezilla is running from RAM.
Press **Enter** to use the default language (***English***):



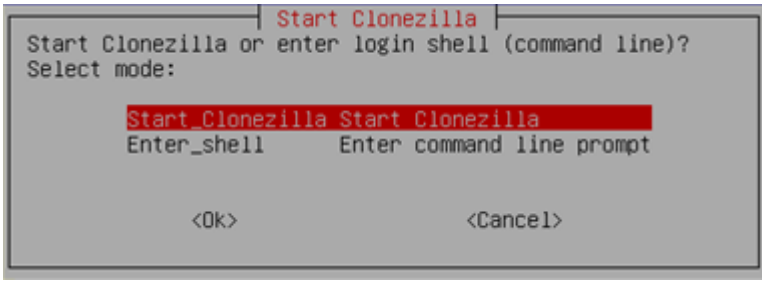
7. Keyboard layout

Press **Enter** to use the default keyboard layout - option ***Don't touch keymap***:

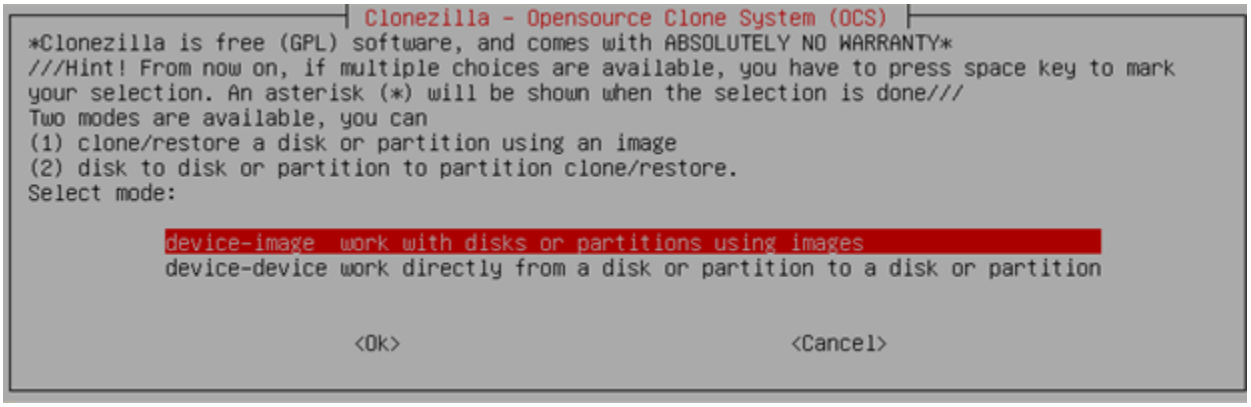


8. Start Clonezilla

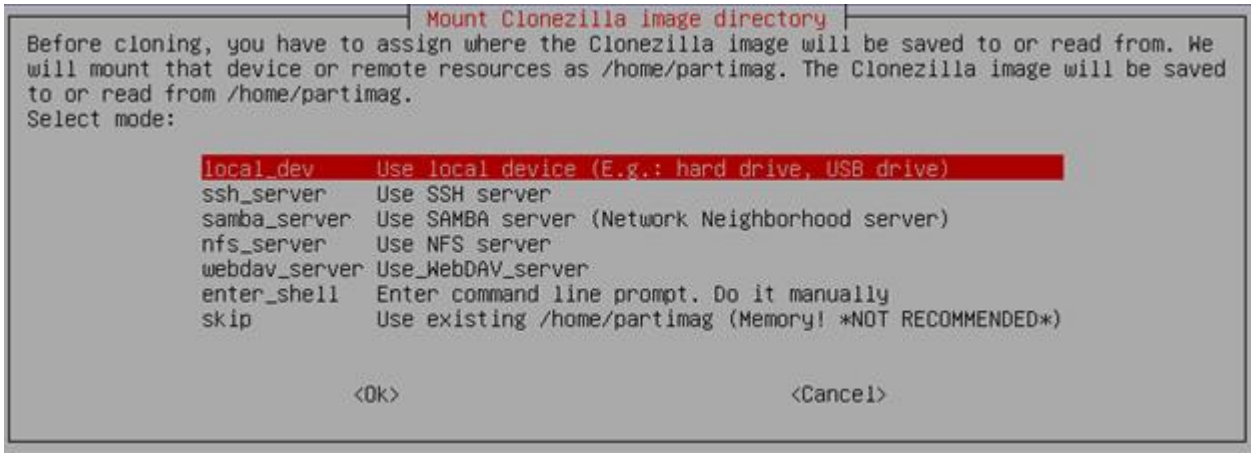
Select ***Start Clonezilla*** and press **Enter**:



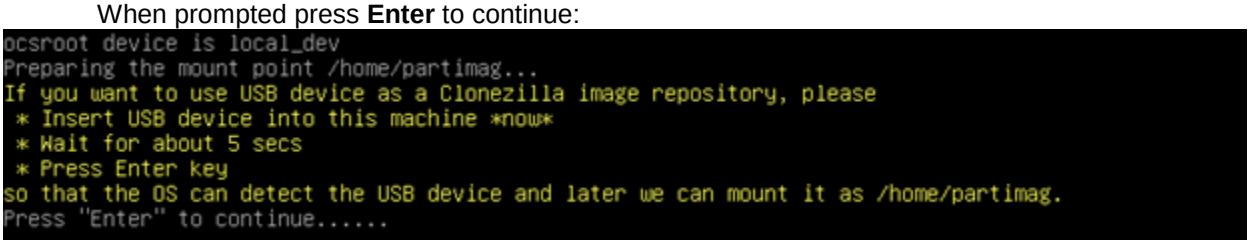
9. Select ***device-image*** option



10. Select ***local_dev*** option

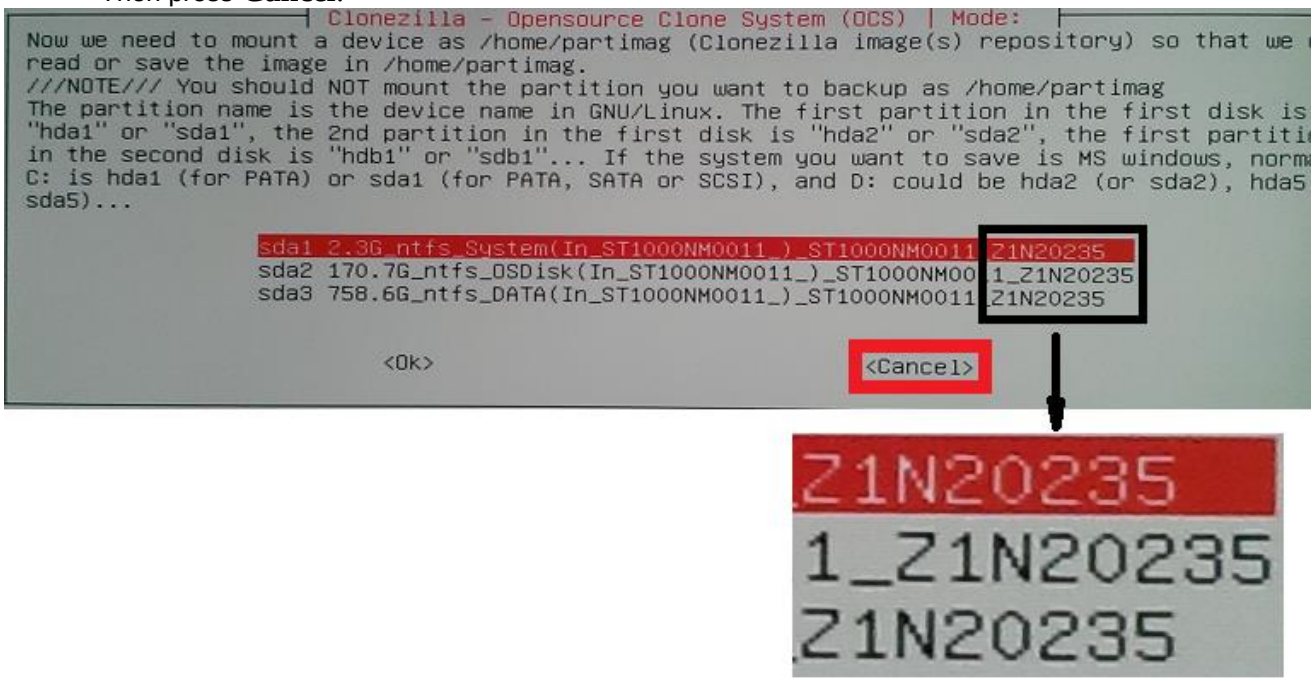


When prompted press **Enter** to continue:

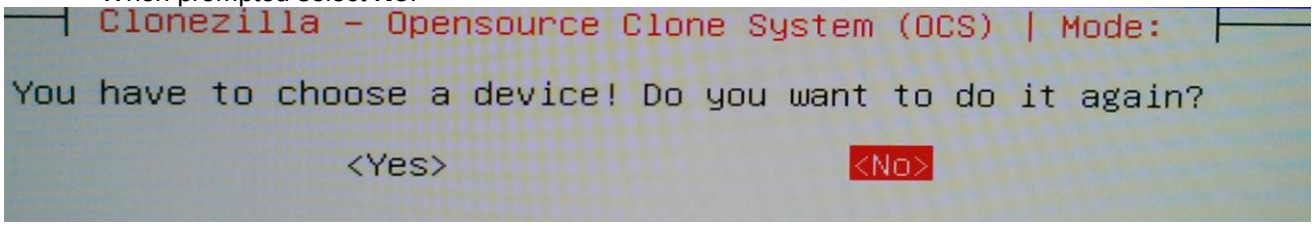


11. Get the original disk serial number

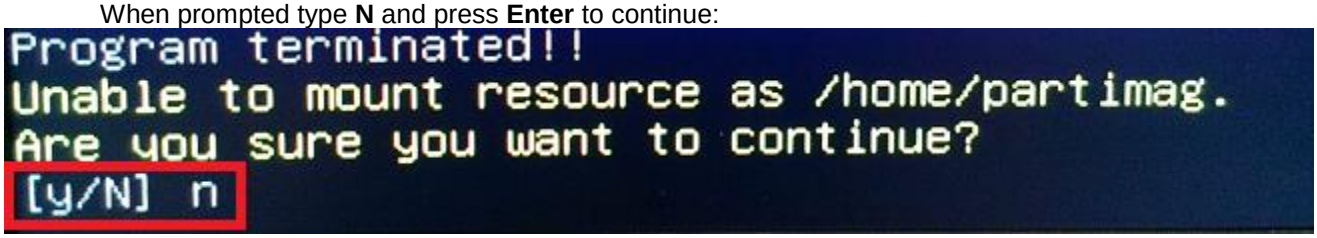
From the new window write down the serial number of the original disk;
Then press **Cancel**:



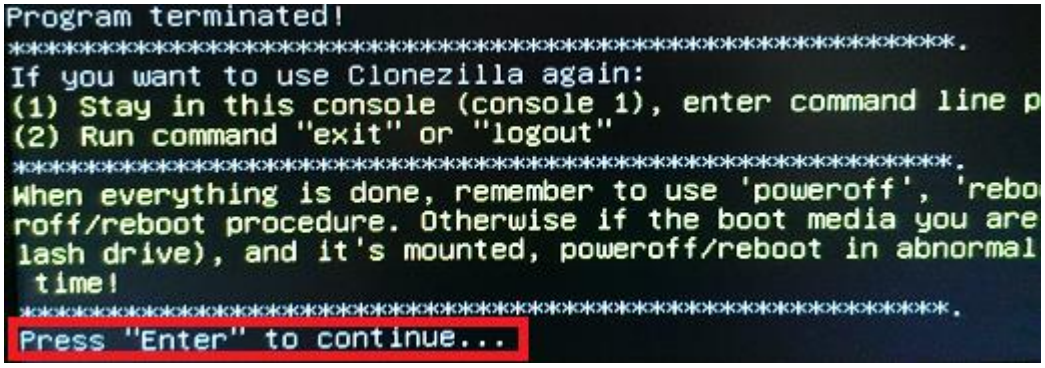
When prompted select **No**:



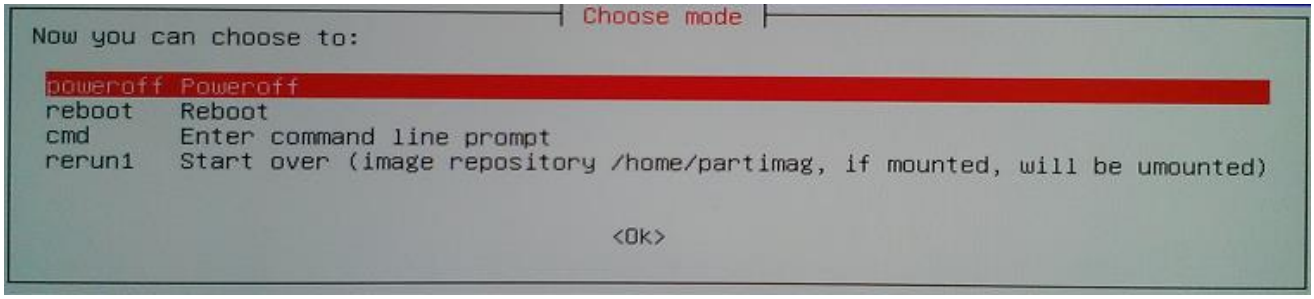
When prompted type **N** and press **Enter** to continue:



When prompted again press **Enter** to continue:



12. Select **Poweroff**:



13. Attach the backup disk

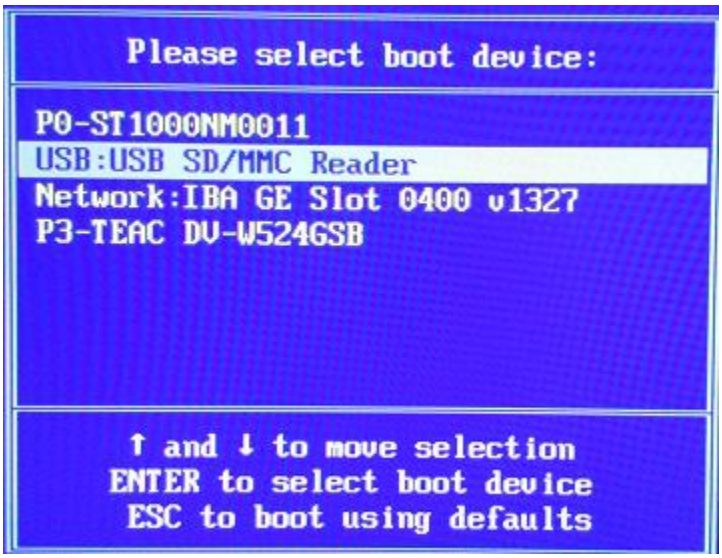
When the PC is powered off attach the backup disk and continue with the desired clone/backup/restore operation.

Part III Disk-to-Disk (Clone)

When you do Disk-to-Disk (clone) both disks should be the same size and attached internally. Do not use Disk-to-Disk clone with external devices.

1. Power on the PC
2. Boot the PC from Clonezilla Live bootable USB

Pressing a hotkey (**F11** for CK2, **F6** for CK3) right after power on the PC will bring up the BIOS boot menu.
Select the USB drive media and press **Enter**:

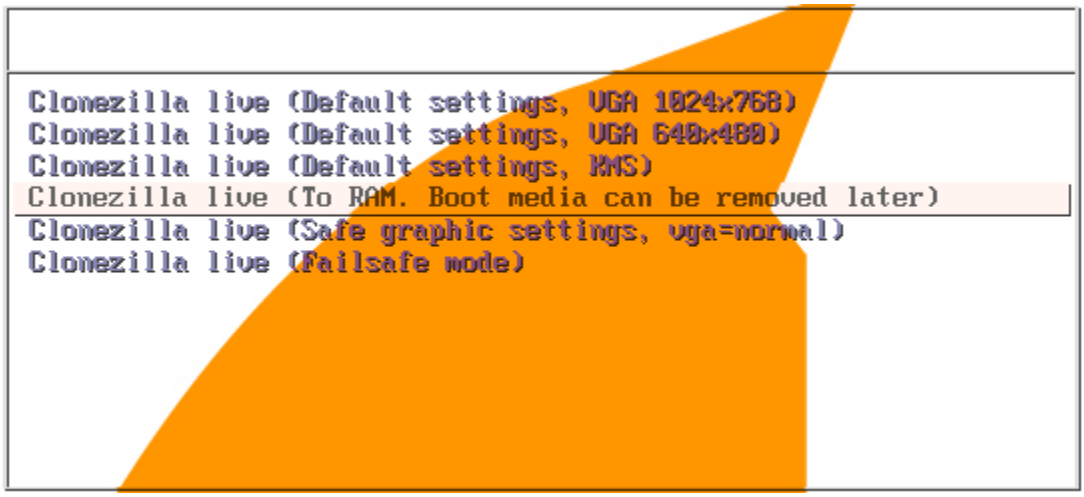


Note:
Hotkey may differ on different machines. Refer to the BIOS option for appropriate hotkey

3. Clonezilla Live boot menu

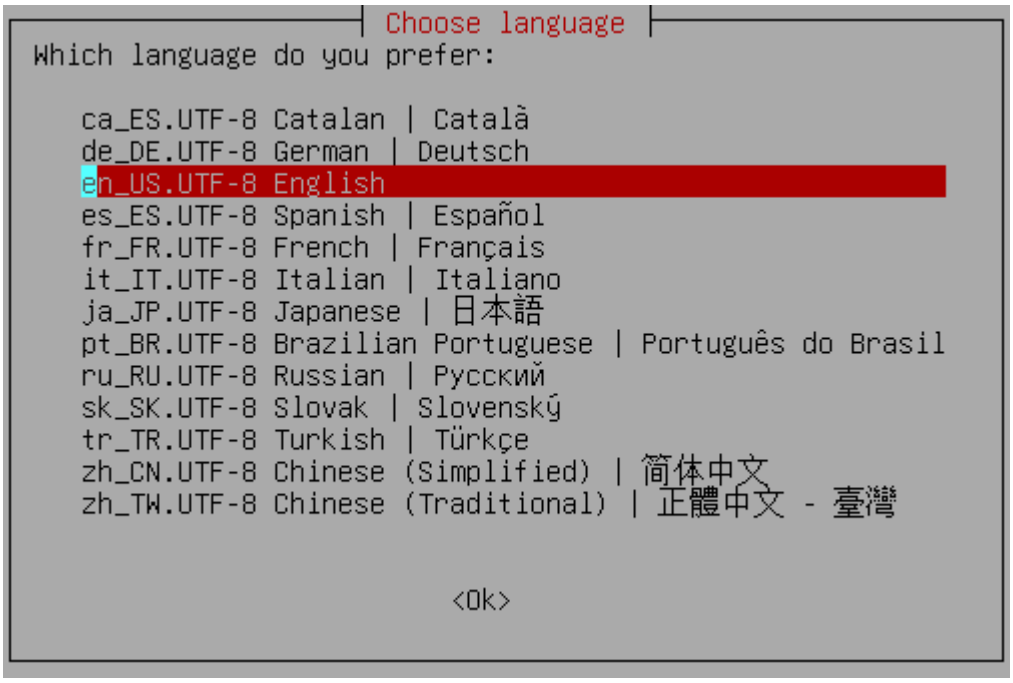
Select ***Other modes of Clonezilla live*** and press **Enter**:

Select ***Clonezilla live (To RAM. Boot media can be removed later)*** and press **Enter**:



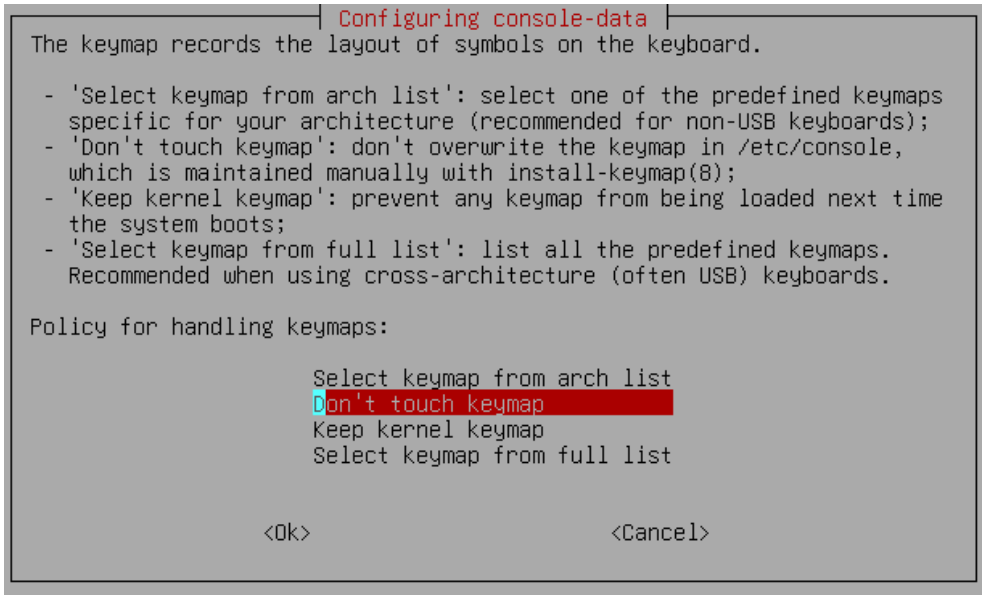
4. Language

Remove Clonezilla Live USB (USB flash drive) – Clonezilla is running from RAM.
Press **Enter** to use the default language (***English***):



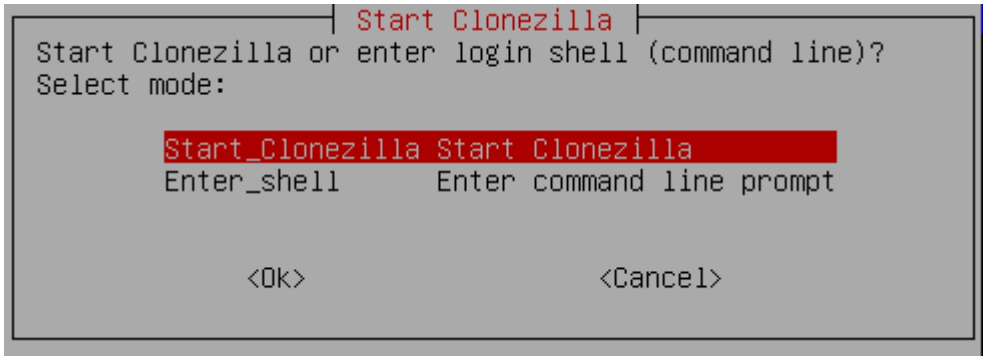
5. Keyboard layout

Press **Enter** to use the default keyboard layout - ***Don't touch keymap***:



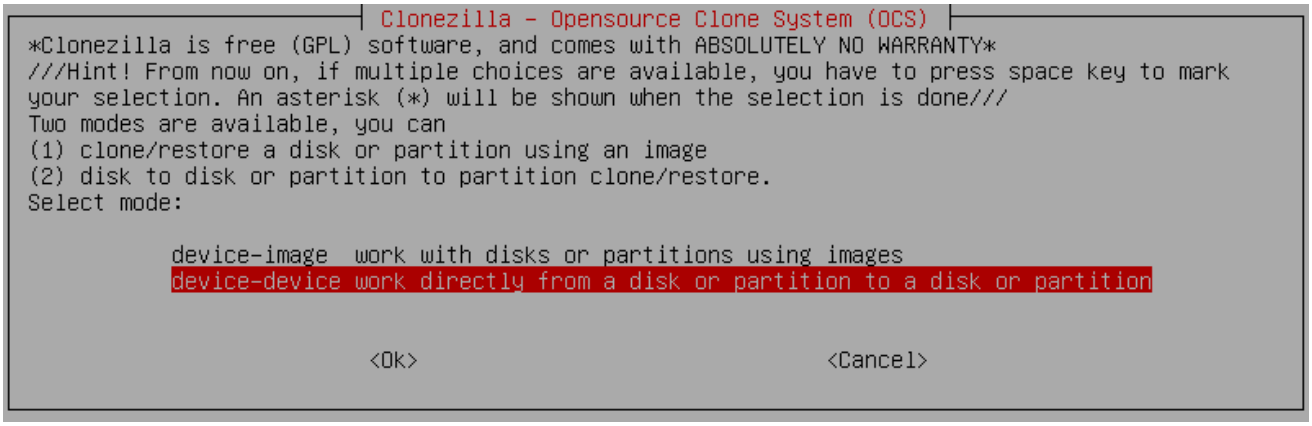
6. Start Clonezilla

Select ***Start Clonezilla*** and press **Enter**:

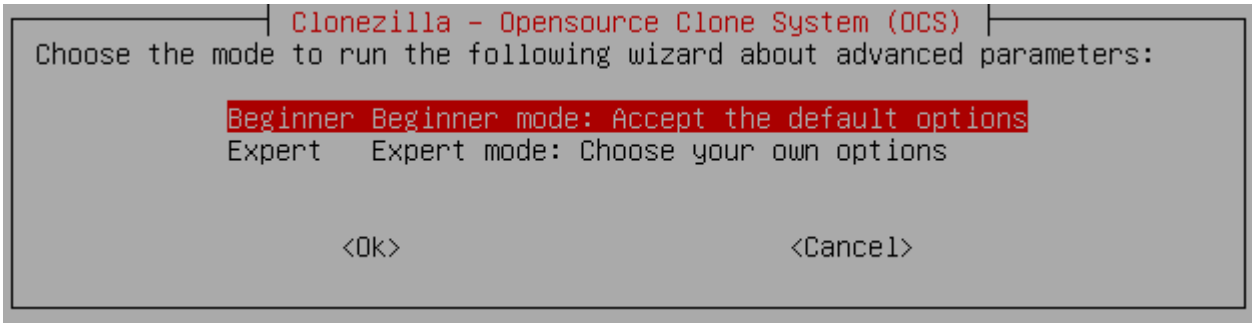


7. Select Clonezilla mode

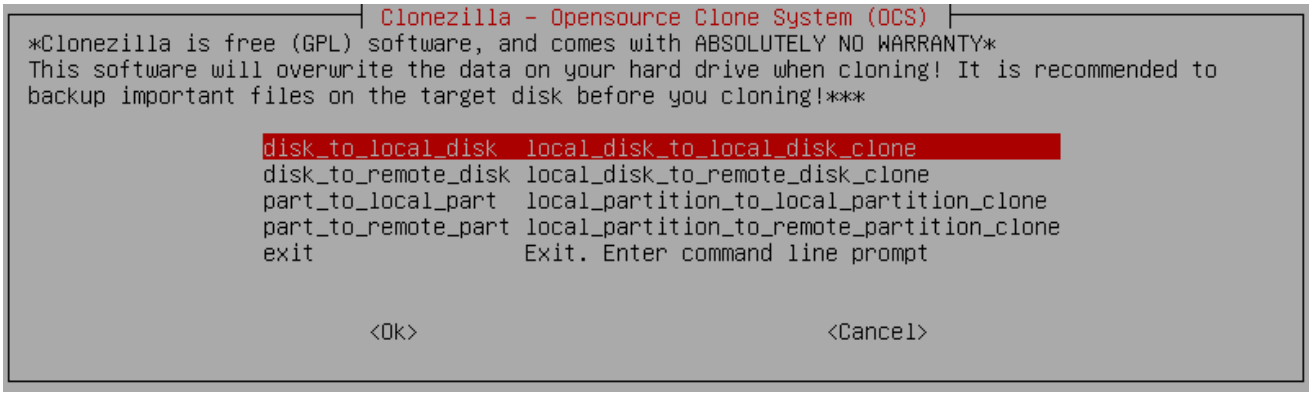
Select ***device-device*** option and press **Enter**:



Select ***Beginner mode*** and press **Enter**:



Select ***disk-to-local-disk*** and press **Enter**:

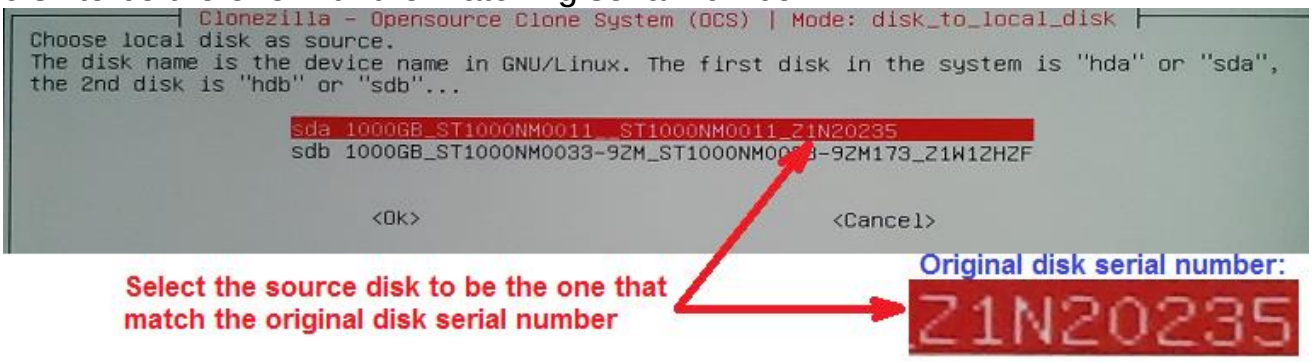


8. Select source disk

It is very important which disk to select as a source as the operation is non-reversible and it will overwrite completely the target disk!

IMPORTANT:

If you want to clone the original disk, select the original disk as a source disk. As you already have the original disk serial number, select the source disk to be the one with the matching serial number:

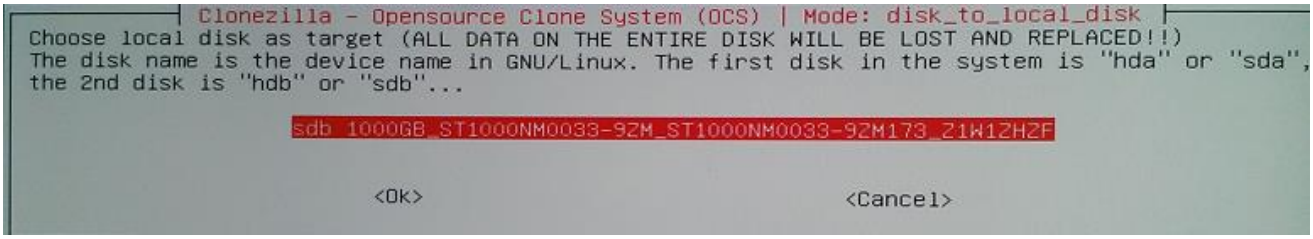


IMPORTANT:

If you want to do disk-to-disk restore, select the other disk (non-matching the original disk serial number) to be the source disk.
This will overwrite the original disk completely!

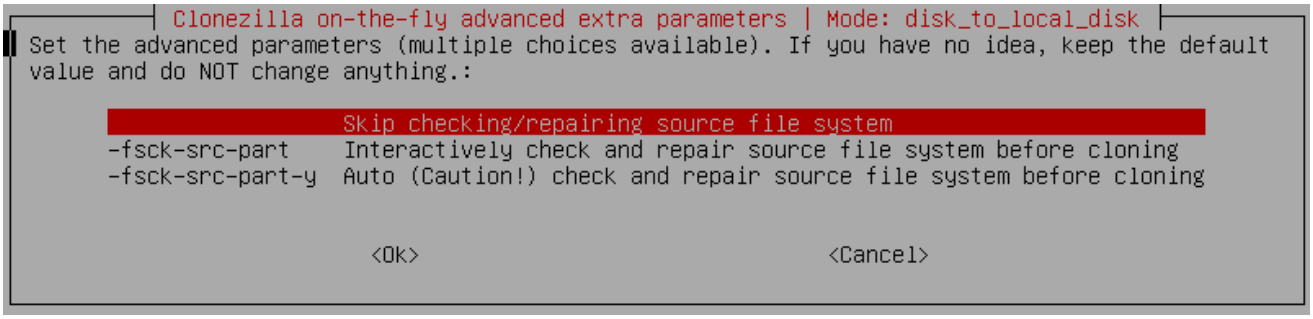
9. Select target disk

Obviously, the disk not selected as a source disk will be used as a target disk:

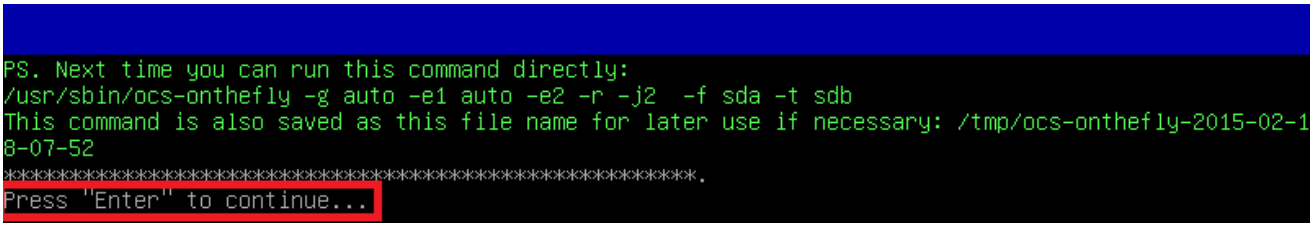


10. Set advanced extra parameters

Select ***Skip checking/repairing source file system*** and press Enter:

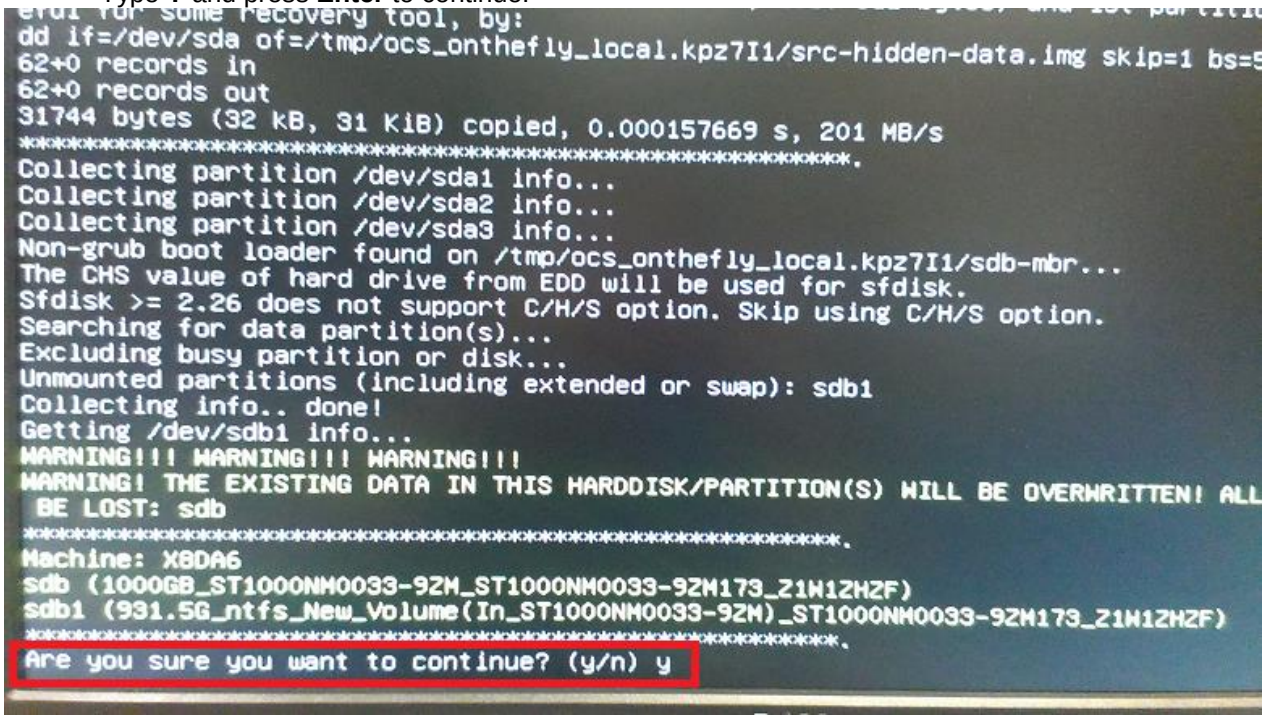


Clonezilla will show you the complete command for this task and will prompt you to continue.
Press **Enter** to continue:

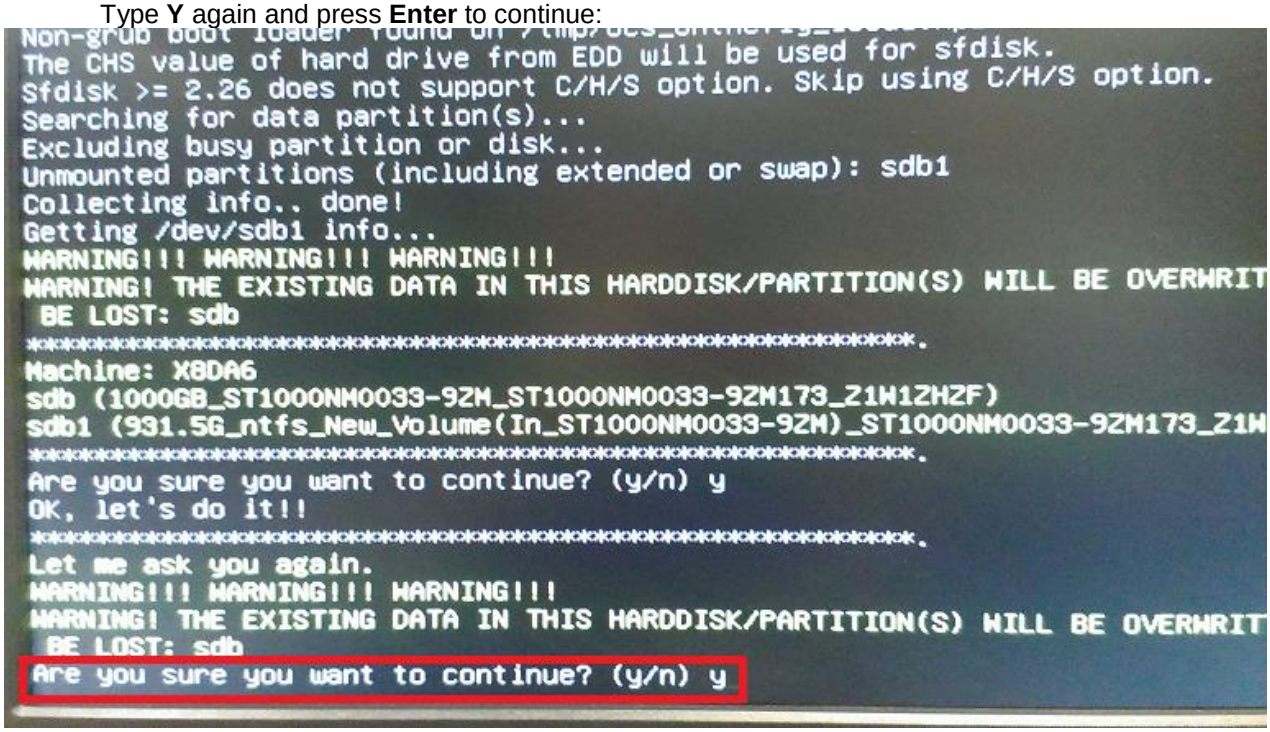


11. Start cloning

Before starting the real cloning, Clonezilla will ask couple of times for confirmation.
Type **Y** and press **Enter** to continue:



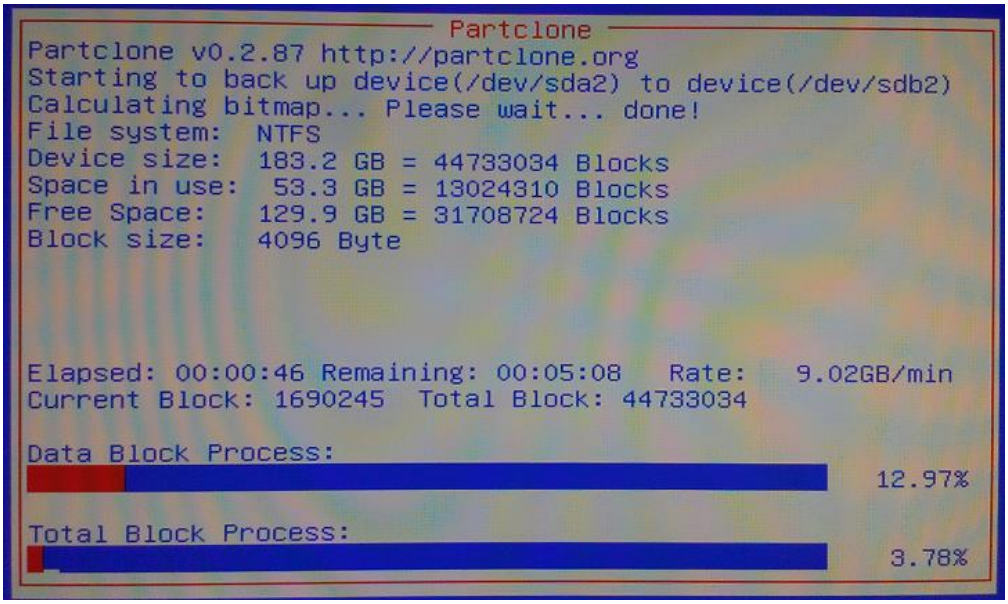
Type **Y** again and press **Enter** to continue:



Clonezilla will create partition table on the target disk first and then ask for confirmation about cloning the boot loader to target disk. Type **Y** and press **Enter** to continue:

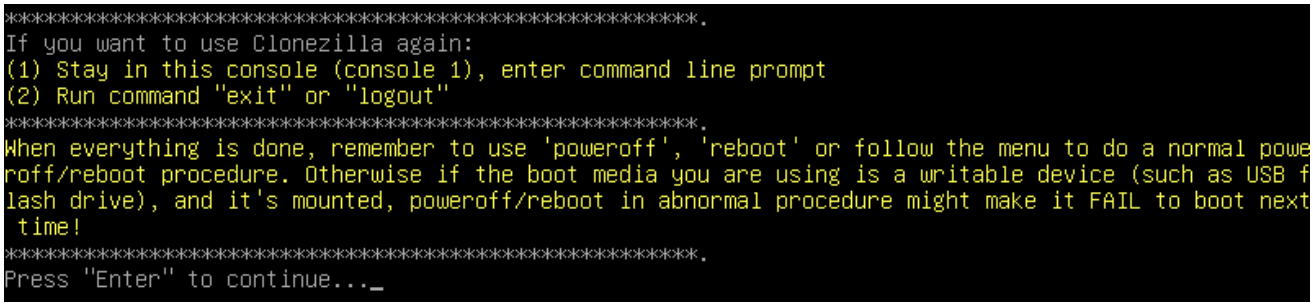
12. Cloning

Clonezilla is cloning the source disk to target disk:



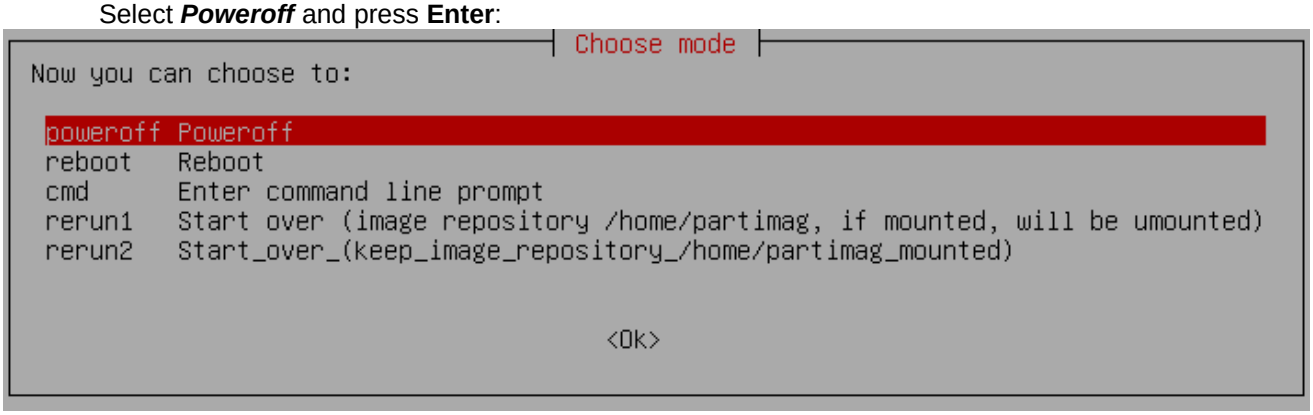
13. Disk is cloned

When everything is done, Clonezilla will report and prompt you to continue.
Press **Enter** to continue:



14. Poweroff

Select ***Poweroff*** and press **Enter**:



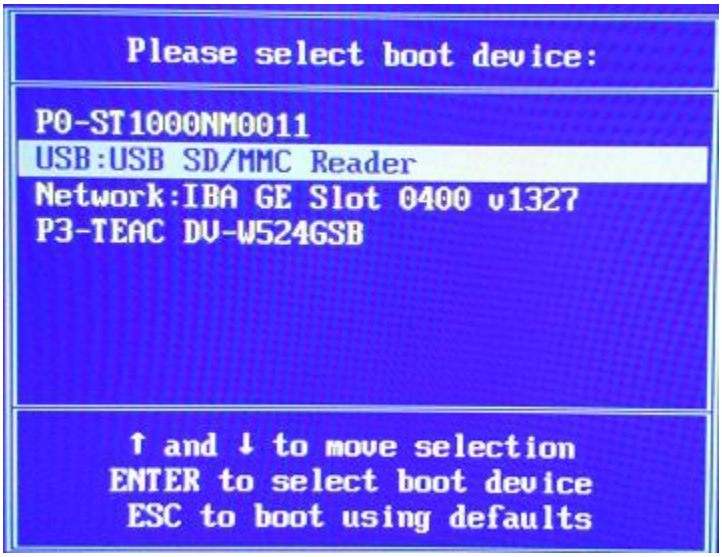
15. Remove the backup disk

When the PC is powered off remove the backup disk.

Part IV Disk-to-Image (Backup)

1. Power on the PC
2. Boot the PC from Clonezilla Live bootable USB

Pressing a hotkey (**F11** for CK2, **F6** for CK3) right after power on the PC will bring up the BIOS boot menu.
Select the USB drive media and press **Enter**:

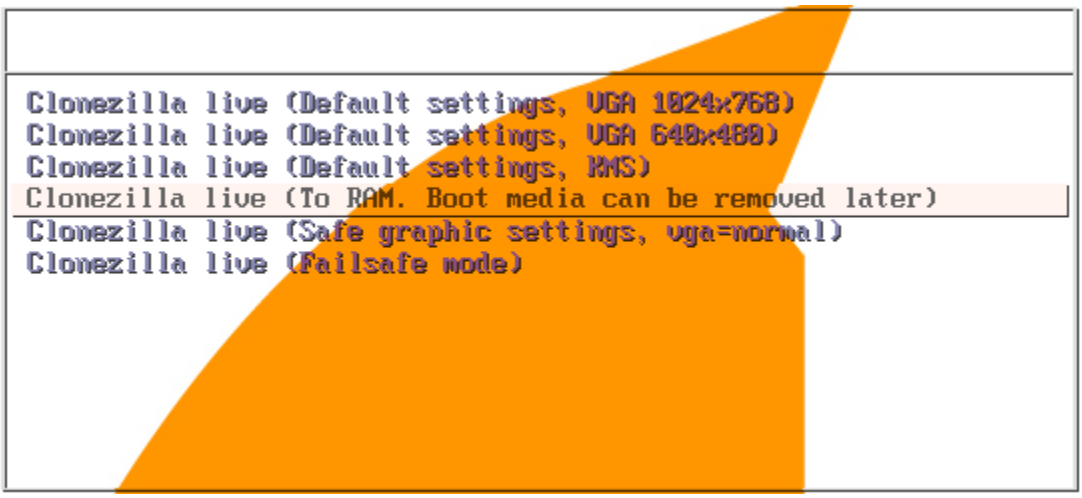


Note:
Hotkey may differ on different machines. Refer to the BIOS option for appropriate hotkey

3. Clonezilla Live boot menu

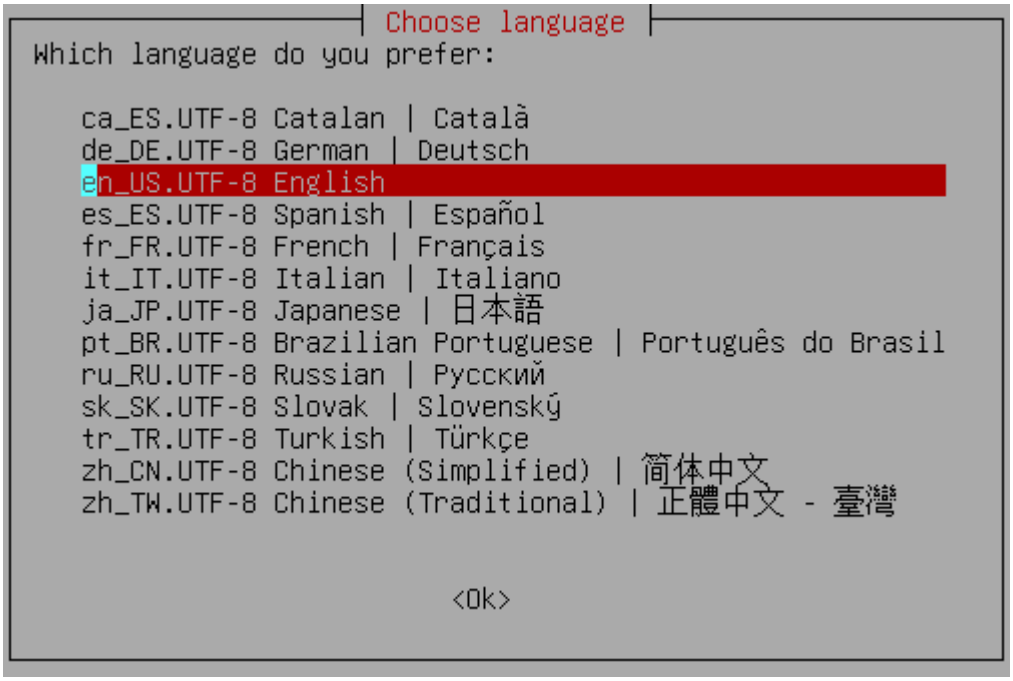
Select ***Other modes of Clonezilla live*** and press **Enter**:

Select ***Clonezilla live (To RAM. Boot media can be removed later)*** and press **Enter**:



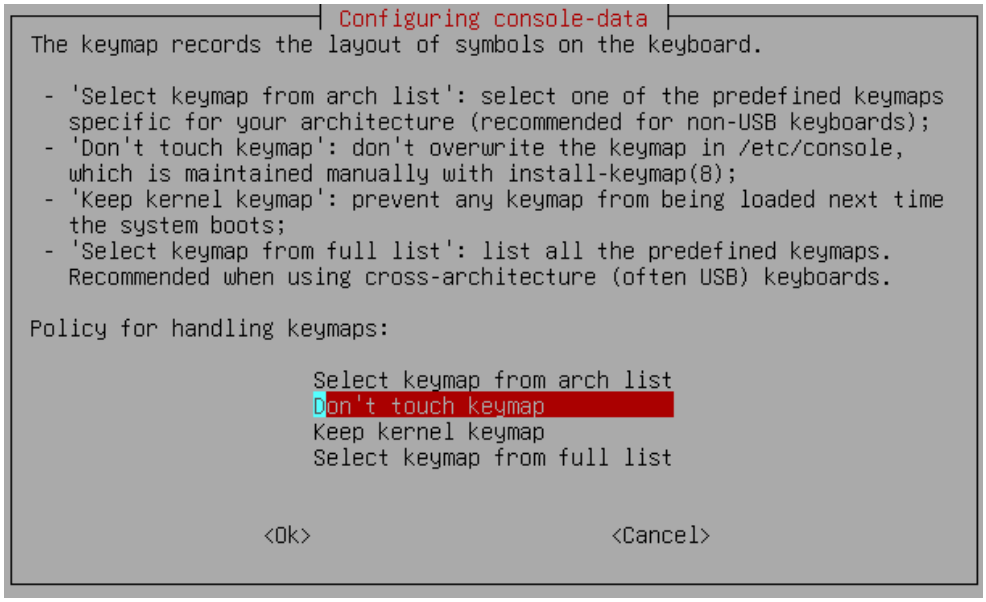
4. Language

Remove Clonezilla Live USB (USB flash drive) – Clonezilla is running from RAM.
Press **Enter** to use the default language (***English***):



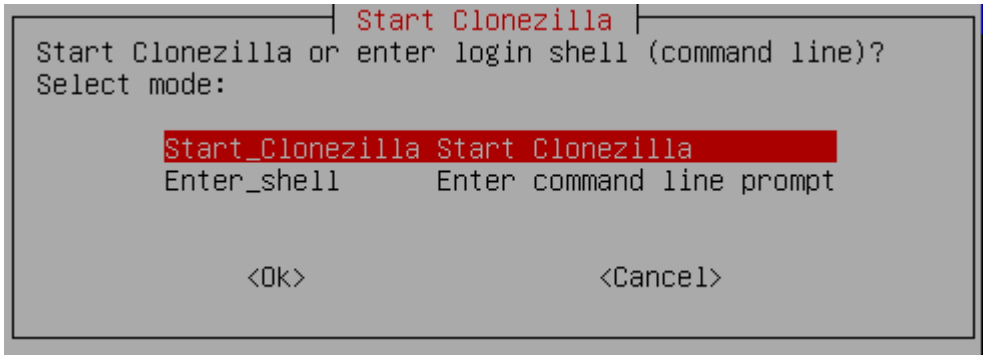
5. Keyboard layout

Press **Enter** to use the default keyboard layout - ***Don't touch keymap***:



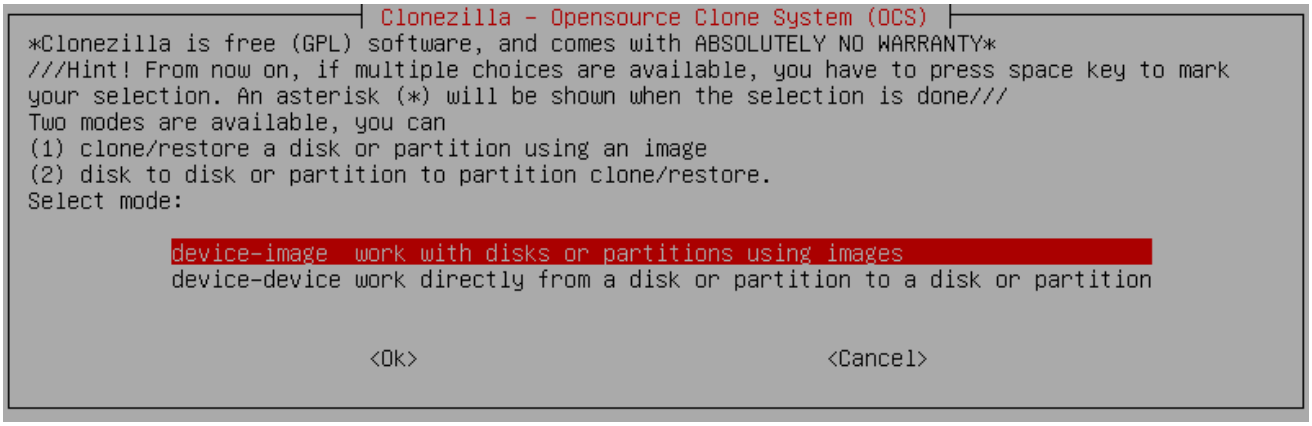
6. Start Clonezilla

Select ***Start Clonezilla*** and press **Enter**:

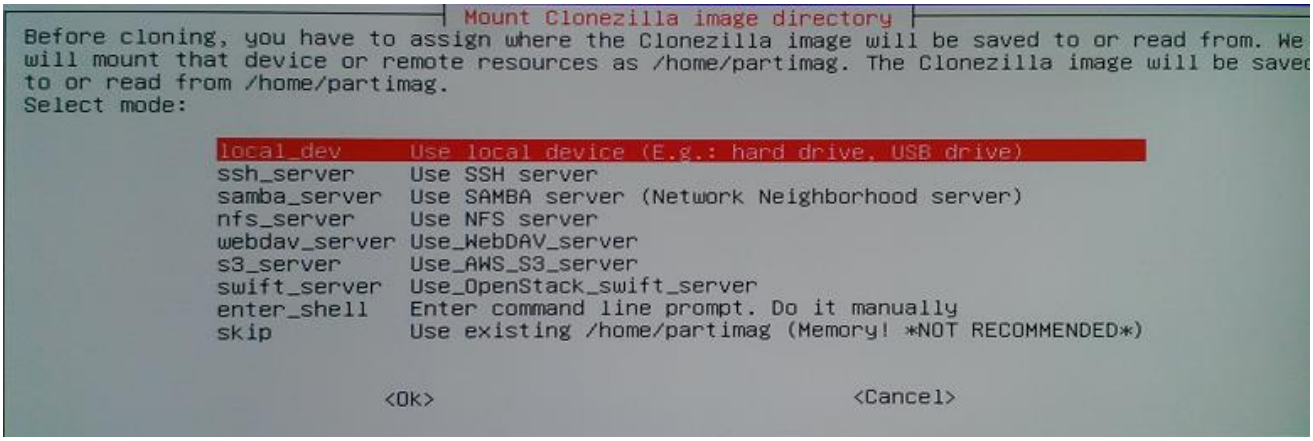


7. Select Clonezilla mode

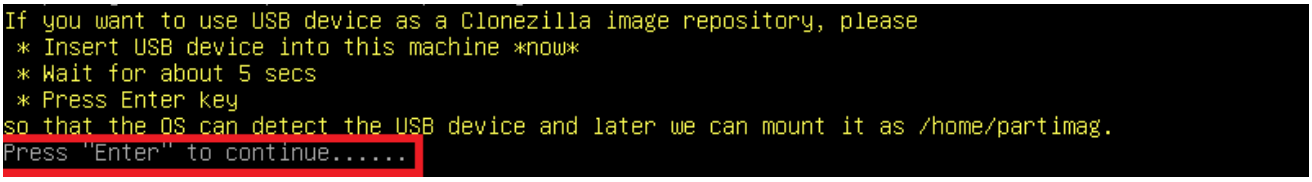
Select ***device-image*** option and press **Enter**:



Select local_dev and press Enter:



When prompted press **Enter** to continue:

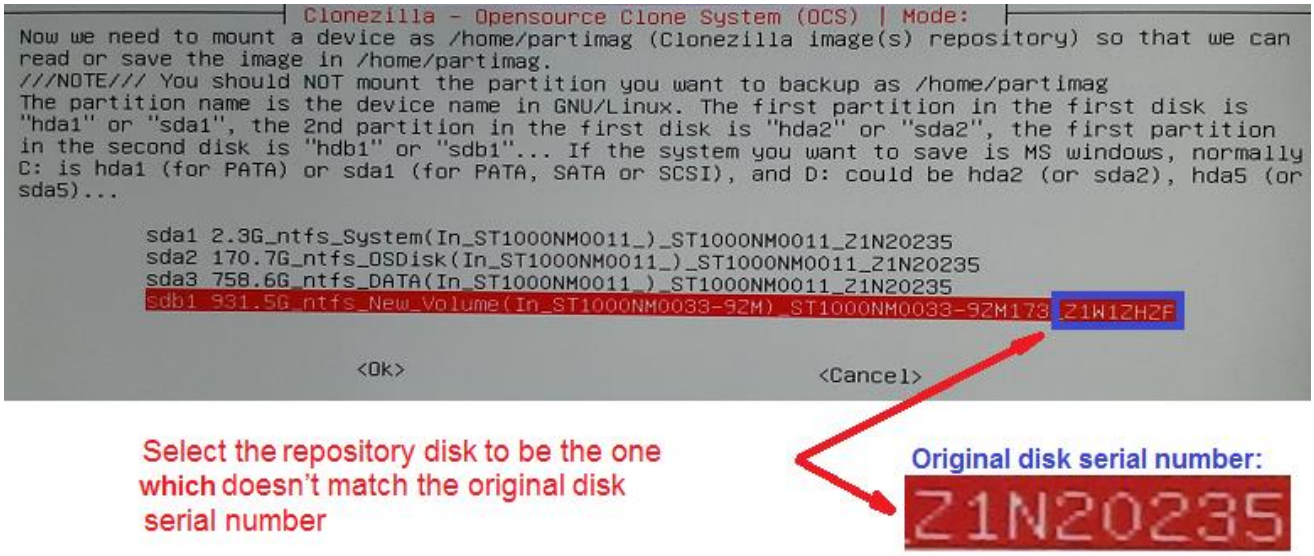


8. Select repository disk where the image will be saved

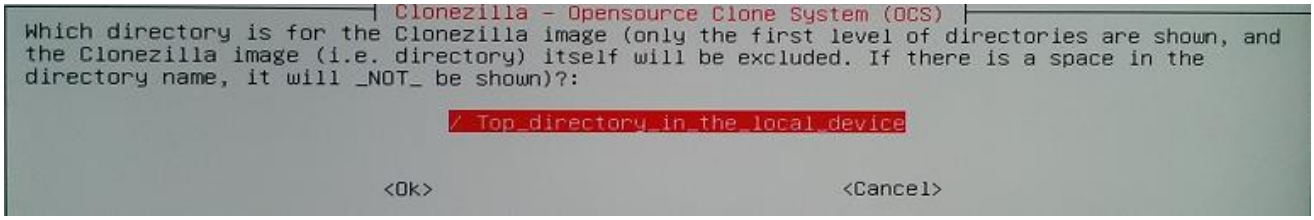
IMPORTANT:

As you are saving original disk as an image, select the repository disk to be the non-original disk. As you already have the original disk serial number, select the repository disk to be the one which doesn't match the original disk serial number.

Select the image repository disk and press **Enter**:

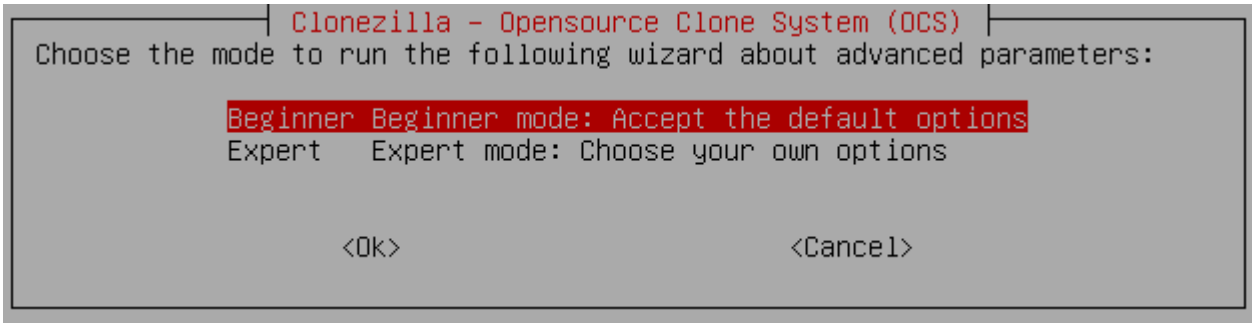


Select ***/ Top_directory_in_the_local_drive*** and press **Enter**:

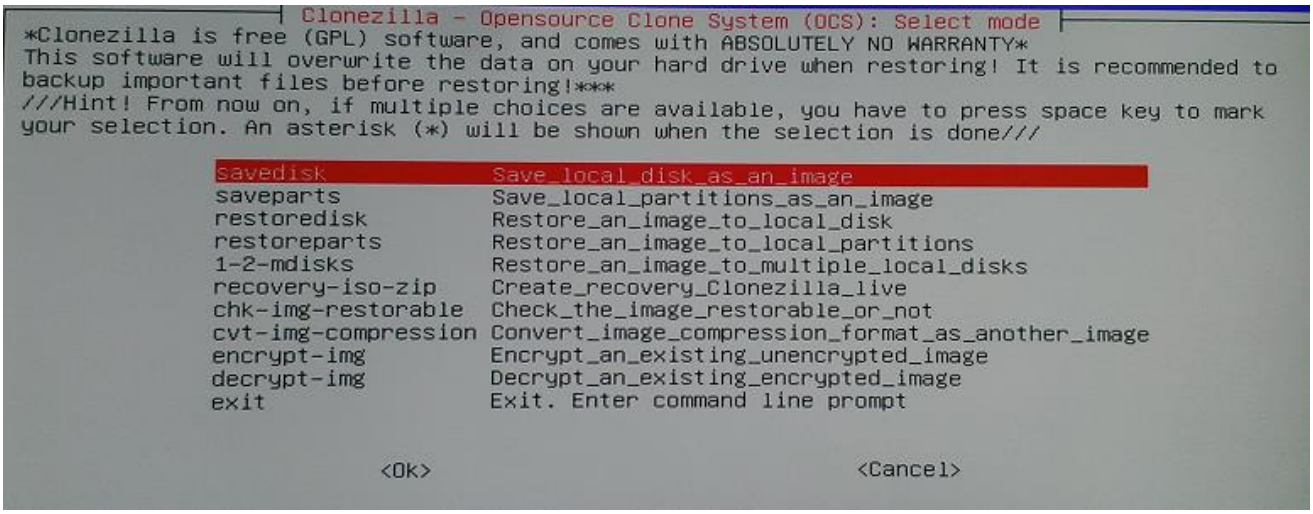


Clonezilla will show you disk usage report and prompt you to continue. Press **Enter** to continue:

Select ***Beginner mode*** and press **Enter**:

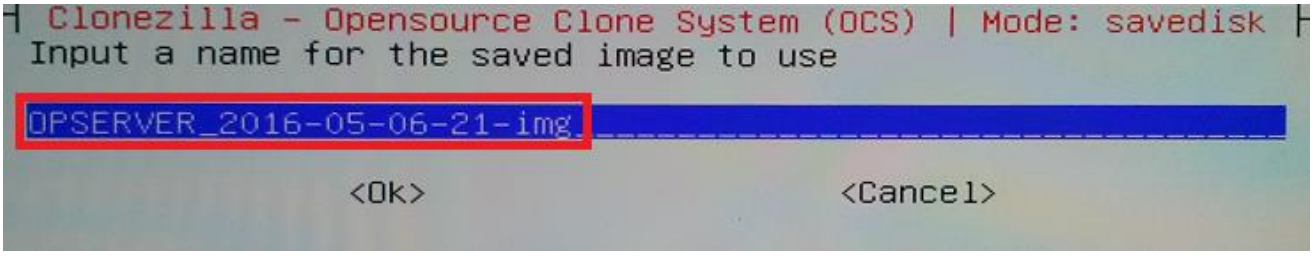


Select ***savedisk*** option and press **Enter**:



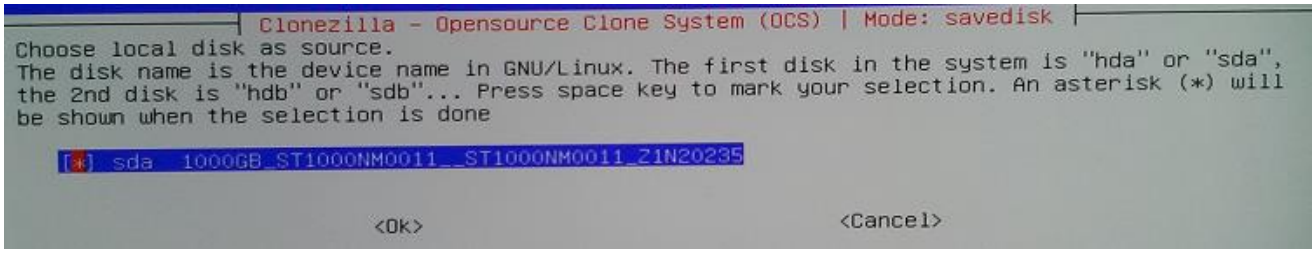
9. Image name

Clonezilla will suggest an image name based on the current date and time. Append the node name before the date/time stamp to distinguish saved images. Type in the image name and press **Enter**:



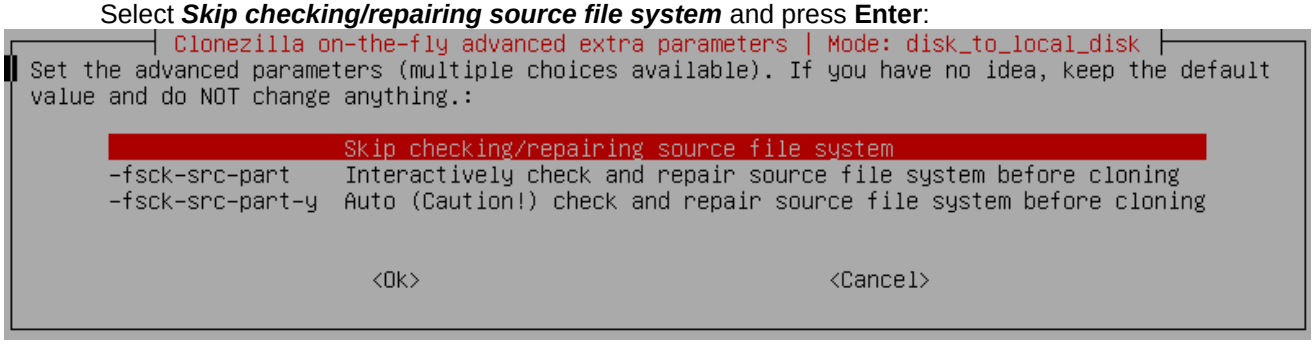
10. Select source disk

As you already selected the Clonezilla repository disk the only available choice for the source disk is the other disk. Press **Enter**:

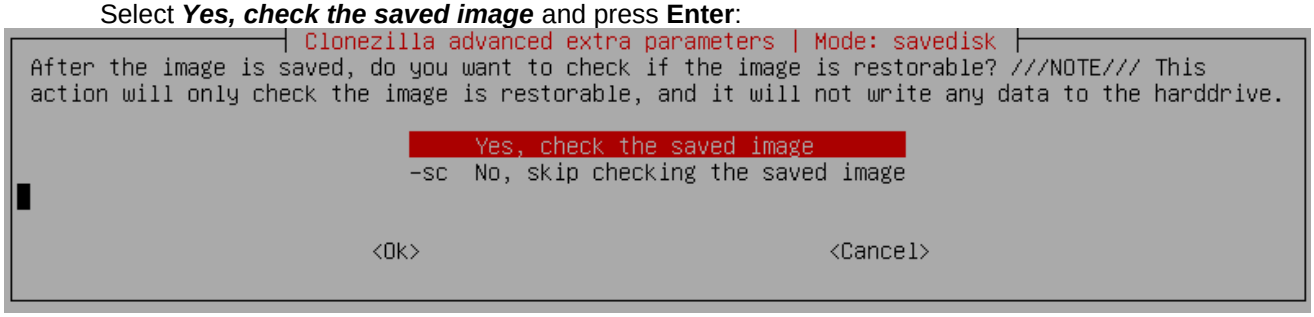


11. Set advanced extra parameters

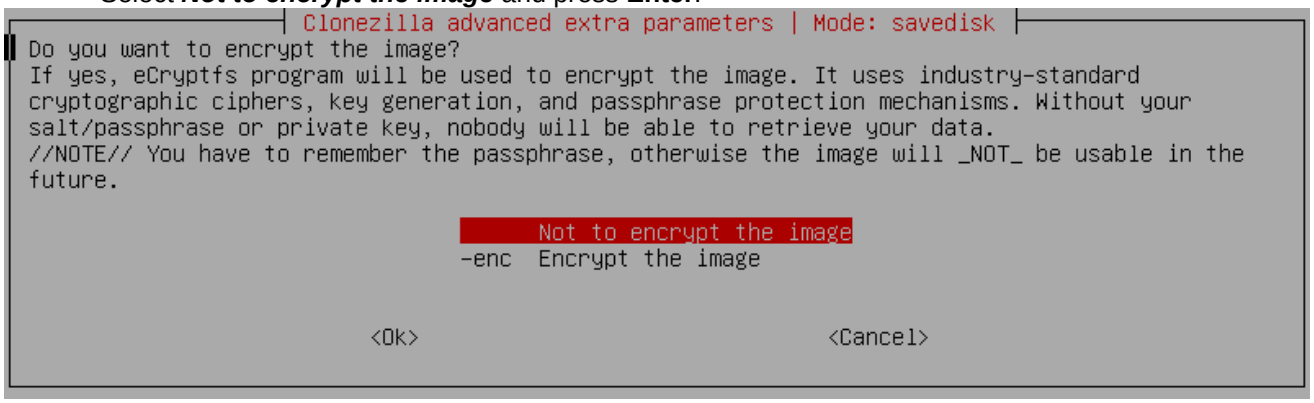
Select ***Skip checking/repairing source file system*** and press **Enter**:



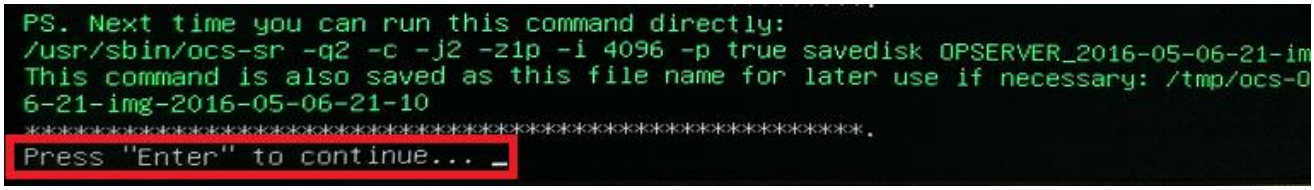
Select ***Yes, check the saved image*** and press **Enter**:



Select ***Not to encrypt the image*** and press **Enter**:

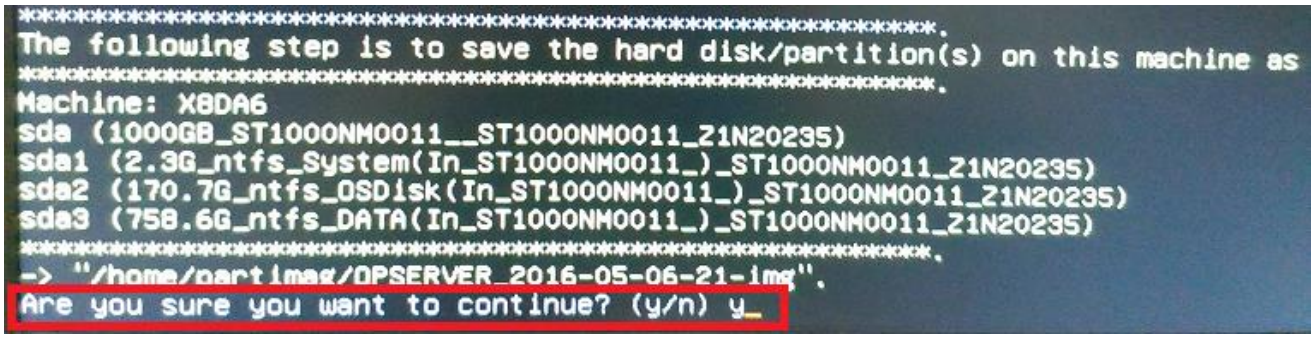


Clonezilla will show you the complete command for this task and prompt you to continue. Press **Enter** to continue:

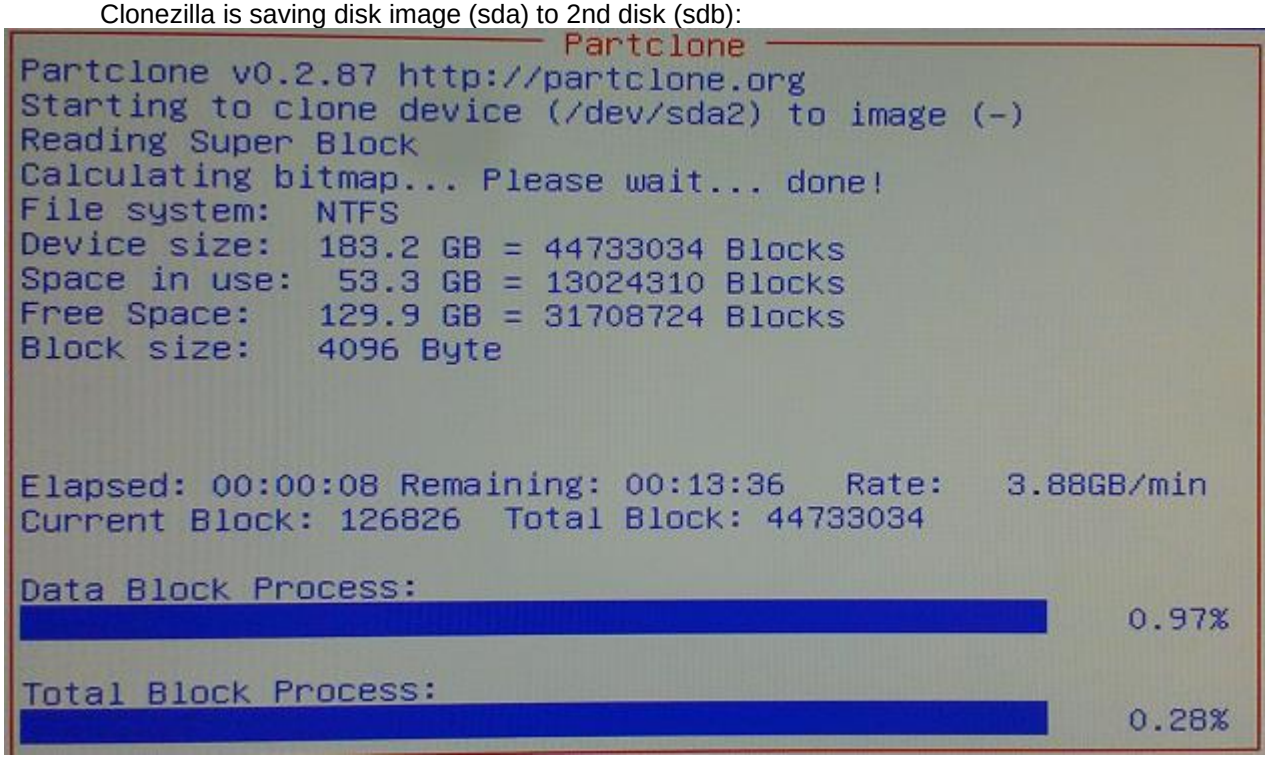


12. Saving disk to image

Before starting the image saving, Clonezilla will ask you for confirmation. Type **Y** and press **Enter**:



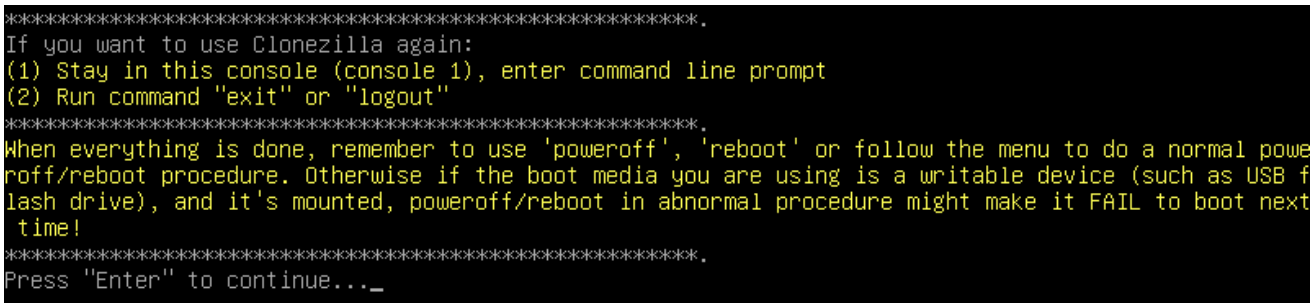
Clonezilla is saving disk image (sda) to 2nd disk (sdb):



When Clonezilla completes saving the image it will check the saved image.

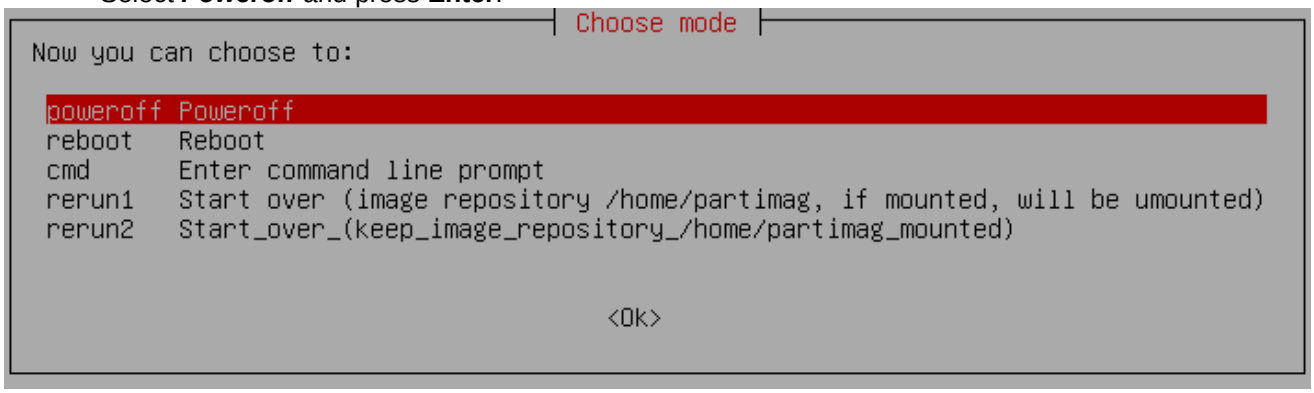
13. Disk image completed

When everything is done, Clonezilla will report and prompt you to continue.
Press **Enter** to continue:



14. Poweroff

Select ***Poweroff*** and press **Enter**:



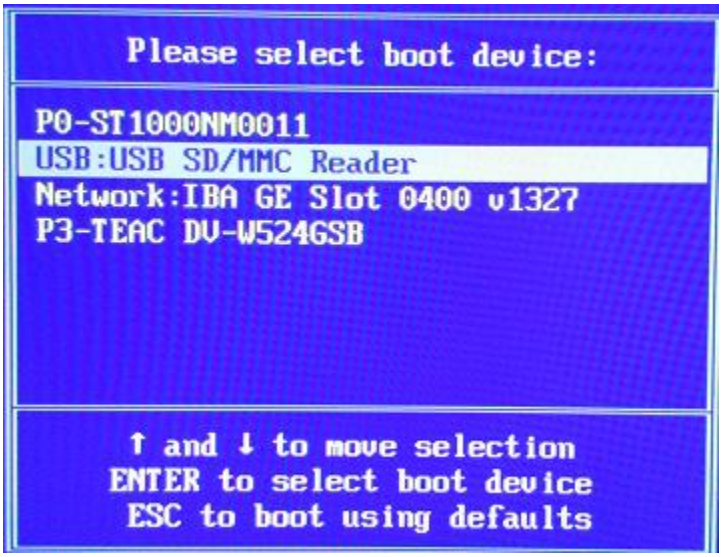
15. Remove the backup disk (image repository disk)

When the PC is powered off remove the backup disk.

Part V Image-to-Disk (Restore)

1. Power on the PC
2. Boot the PC from Clonezilla Live bootable USB

Pressing a hotkey (**F11** for CK2, **F6** for CK3) right after power on the PC will bring up the BIOS boot menu.
Select the USB drive media and press **Enter**:

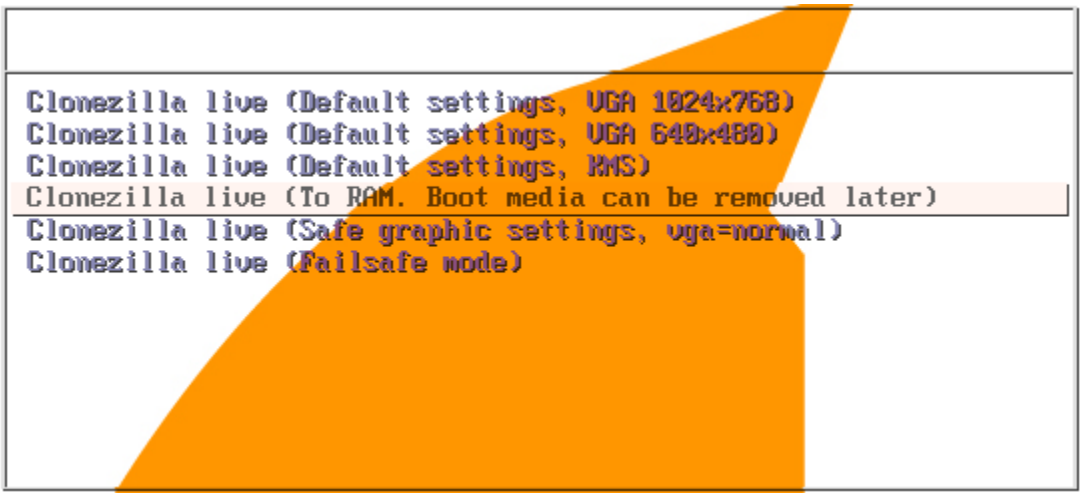


Note:
Hotkey may differ on different machines. Refer to the BIOS option for appropriate hotkey.

3. Clonezilla Live boot menu

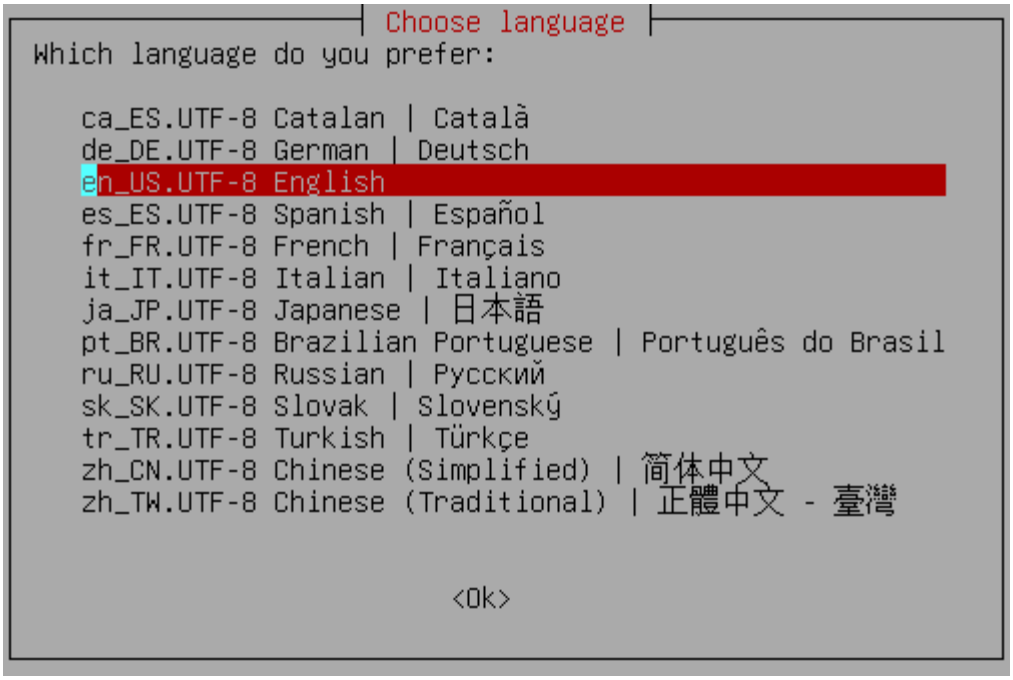
Select ***Other modes of Clonezilla live*** and press **Enter**:

Select ***Clonezilla live (To RAM. Boot media can be removed later)*** and press **Enter**:



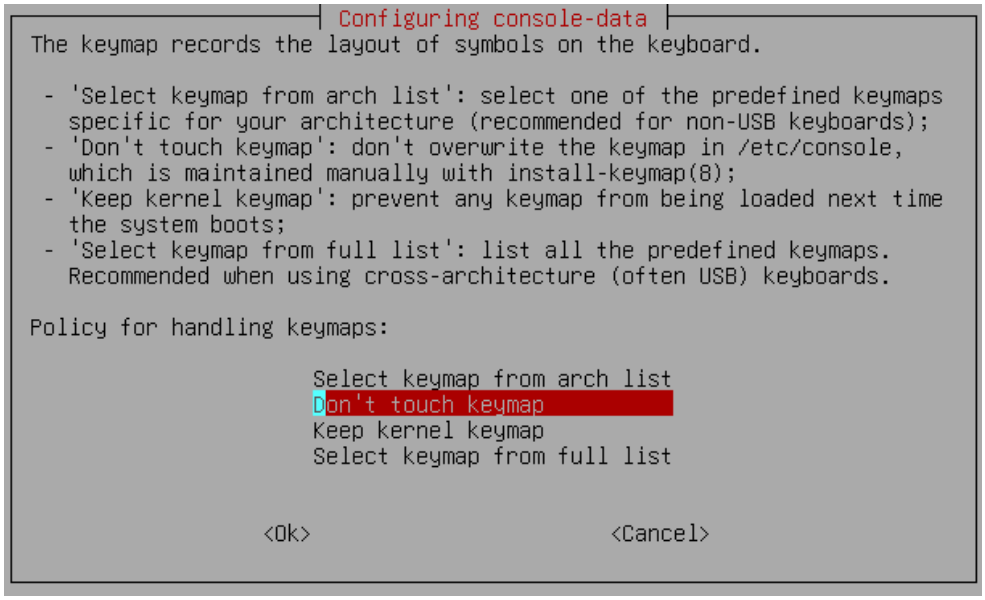
4. Language

Remove Clonezilla Live USB (USB flash drive) – Clonezilla is running from RAM.
Press **Enter** to use the default language (***English***):



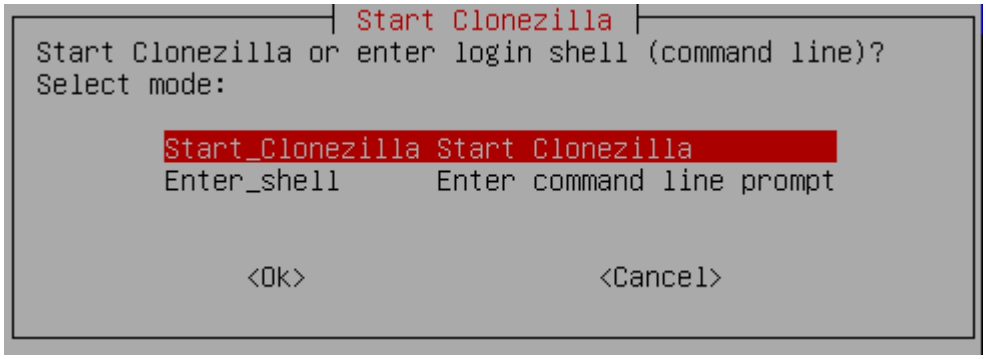
5. Keyboard layout

Press **Enter** to use the default keyboard layout - ***Don't touch keymap***:



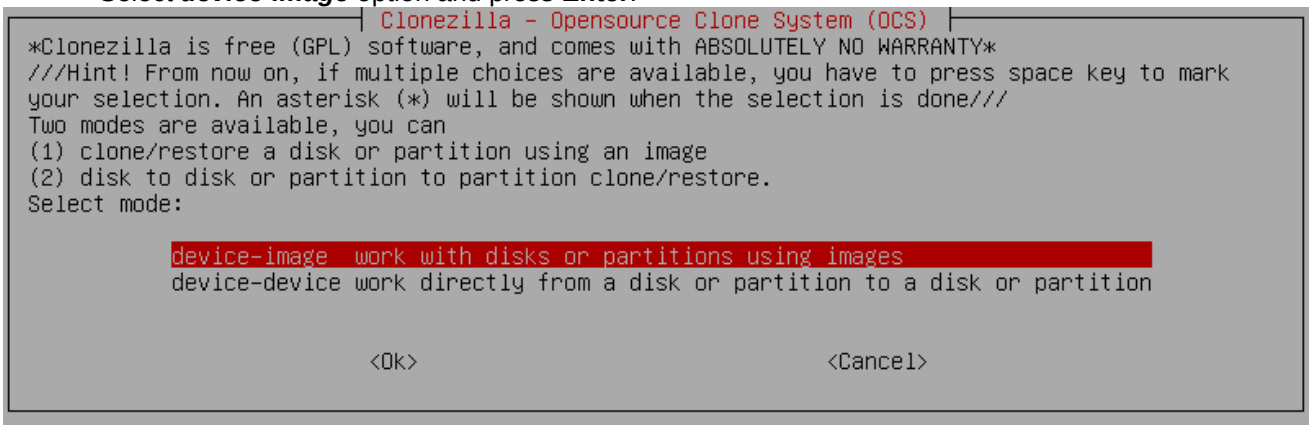
6. Start Clonezilla

Select ***Start Clonezilla*** and press **Enter**:

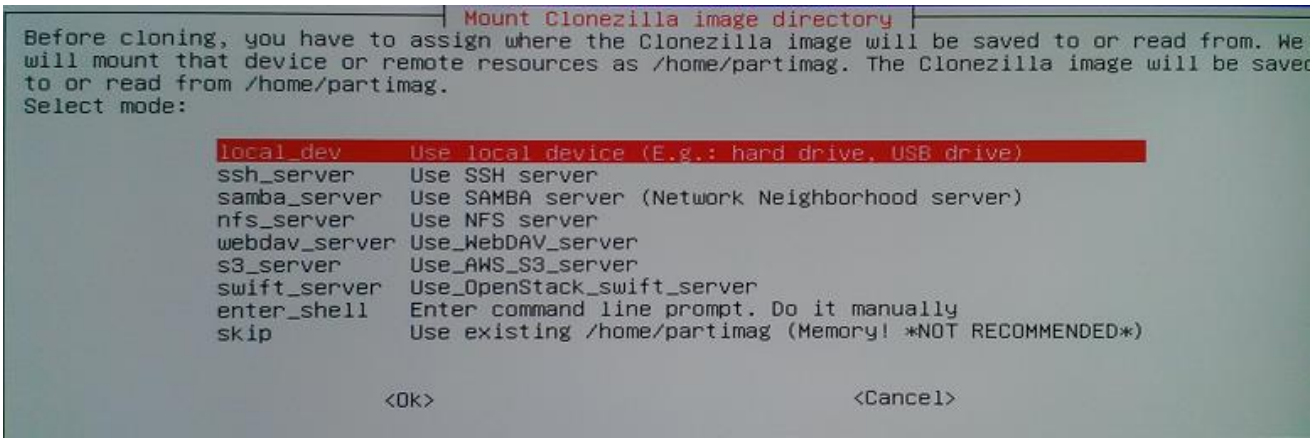


7. Select Clonezilla mode

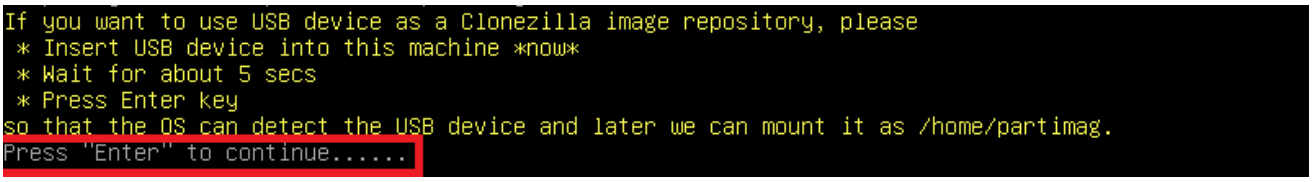
Select ***device-image*** option and press **Enter**:



Select ***local_dev*** and press **Enter**:



When prompted press **Enter** to continue:

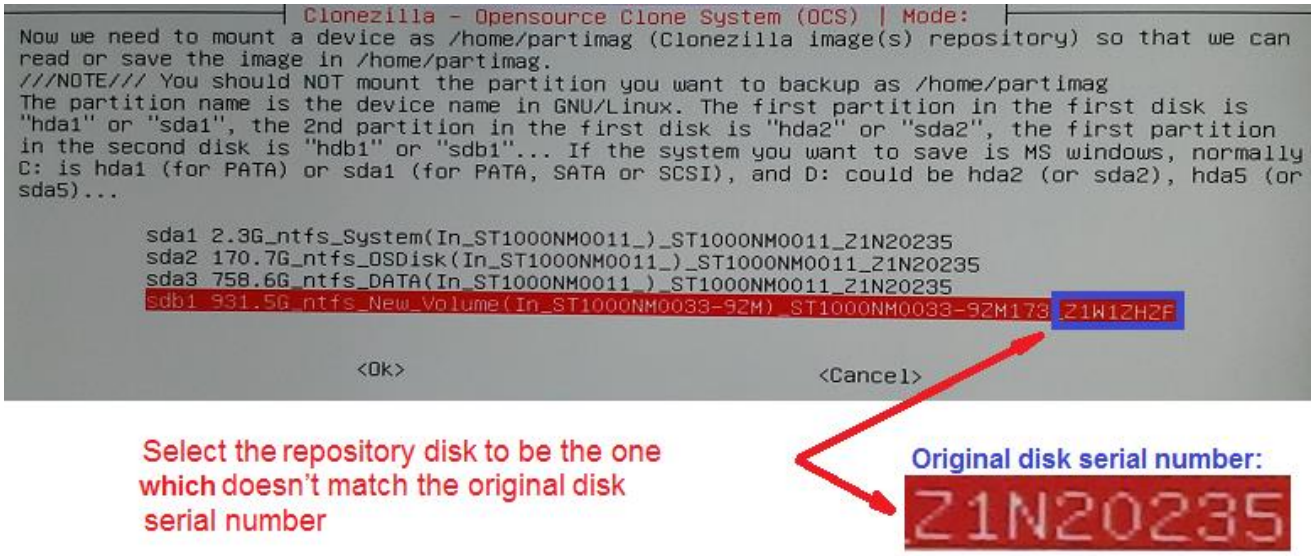


8. Select repository disk where the image will be read from

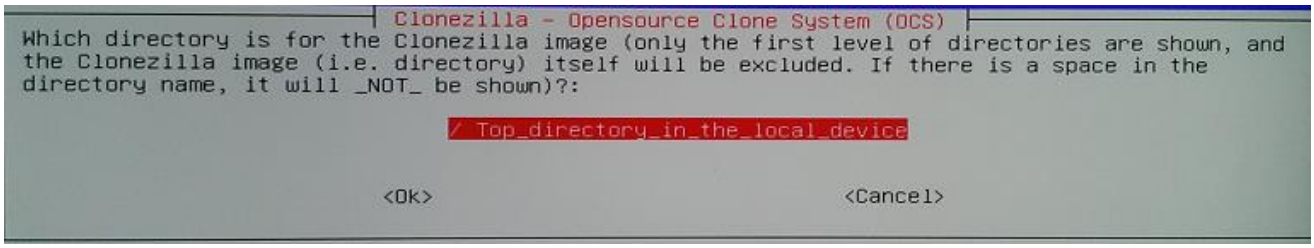
IMPORTANT:

As you are restoring an image to original disk, select the repository disk to be the non-original disk. As you already have the original disk serial number, select the repository disk to be the one which doesn't match the original disk serial number.

Select the image repository disk and press **Enter**:

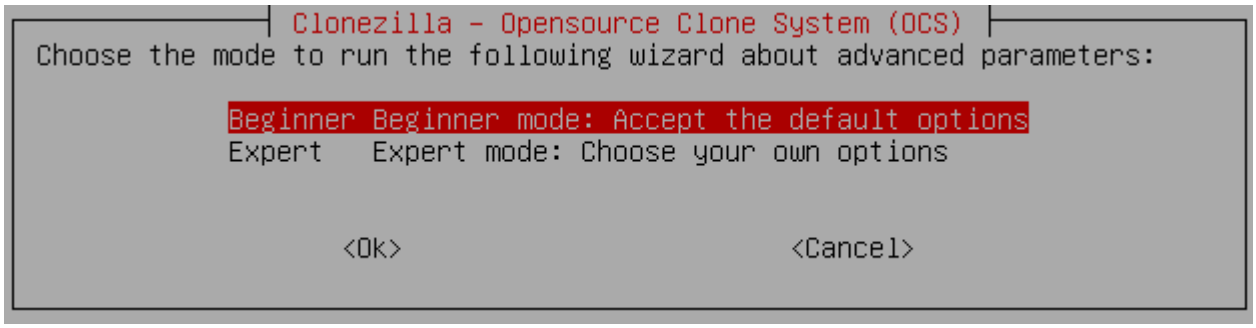


Select ***/ Top_directory_in_the_local_drive*** and press **Enter**:

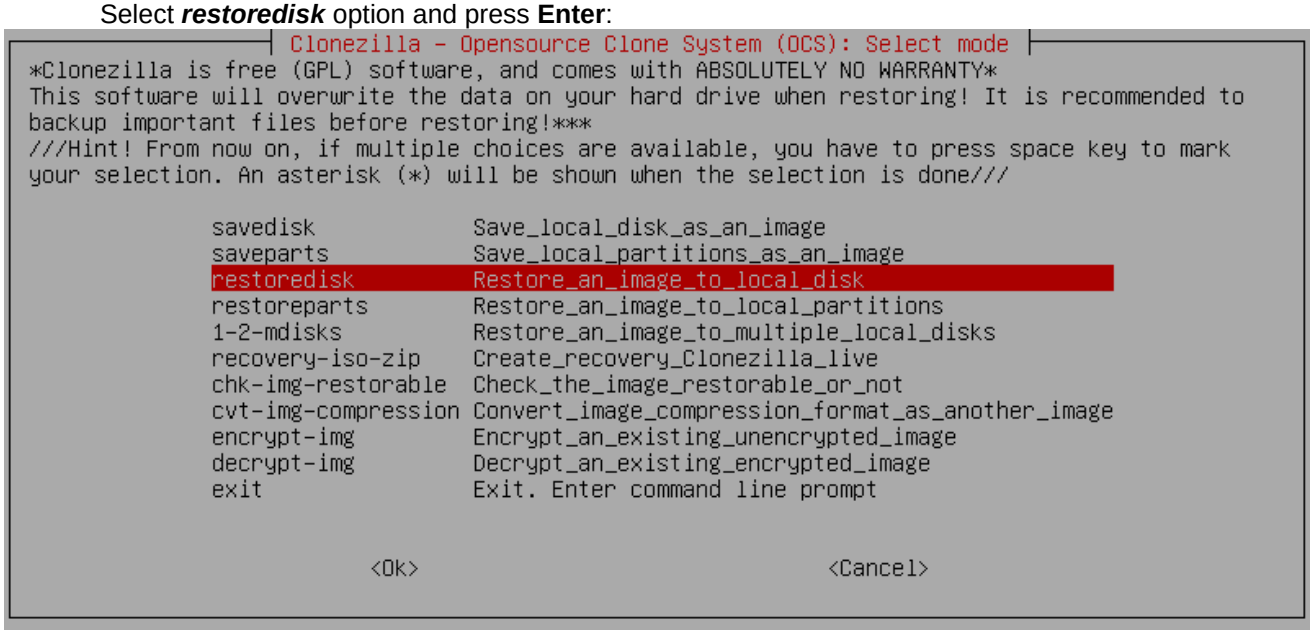


Clonezilla will show you the disk usage report and prompt you to continue. Press **Enter** to continue:

Select ***Beginner*** mode and press Enter:

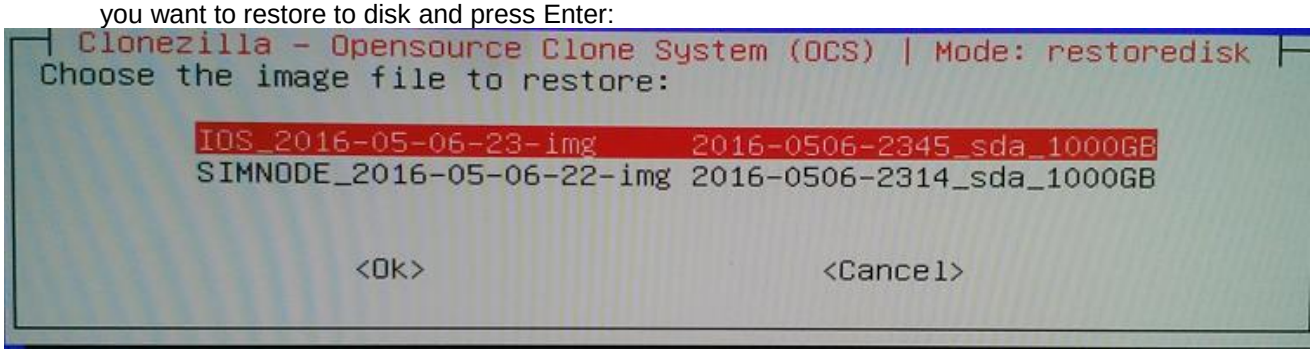


Select ***restoredisk*** option and press **Enter**:



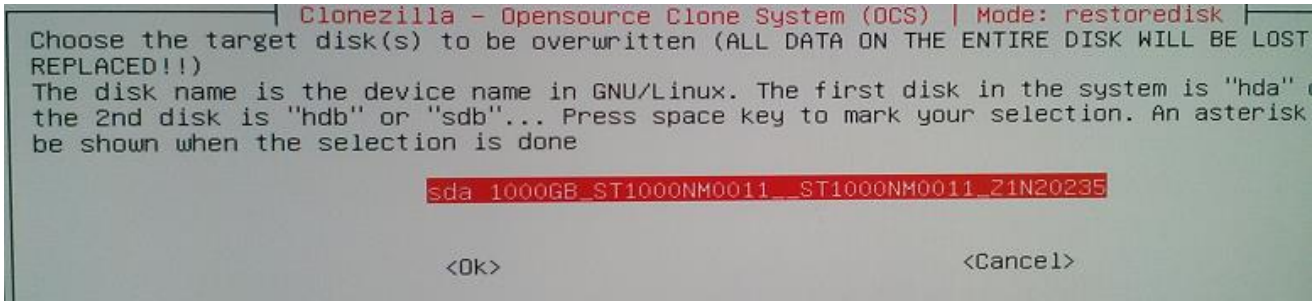
9. Select the image to be restored to disk

Clonezilla will show you all available images previously saved to repository disk. Select the image you want to restore to disk and press Enter:

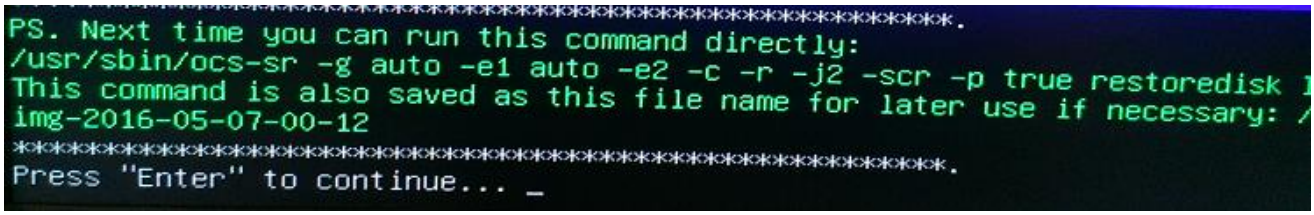


10. Select the target disk (disk to be restored from image)

As you already selected the Clonezilla repository disk the only available choice for the source disk is the other disk. Press **Enter**:

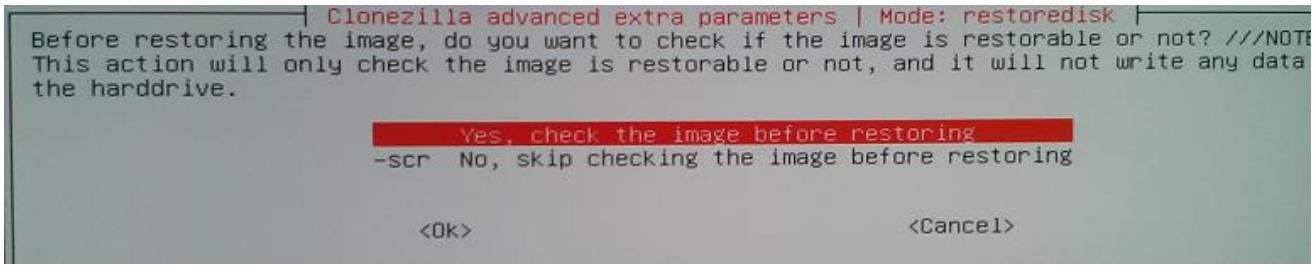


Clonezilla will show you the complete command to run this task and prompt you to continue.
Press **Enter** to continue:



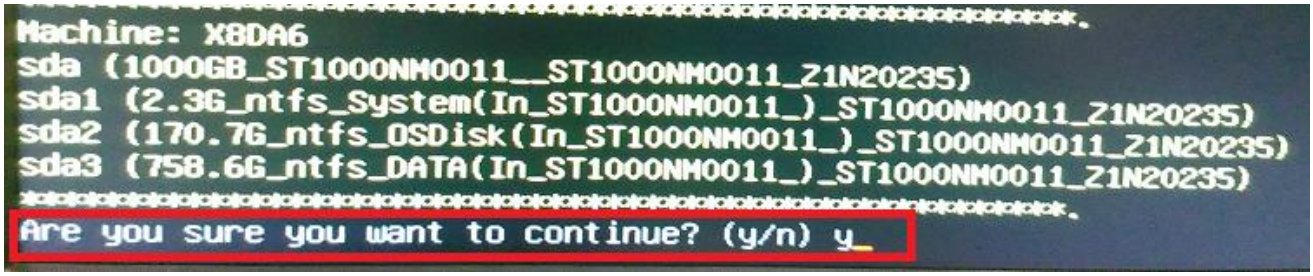
11. Set advanced extra parameters

Select ***Yes, check the image before restoring*** and press **Enter**:

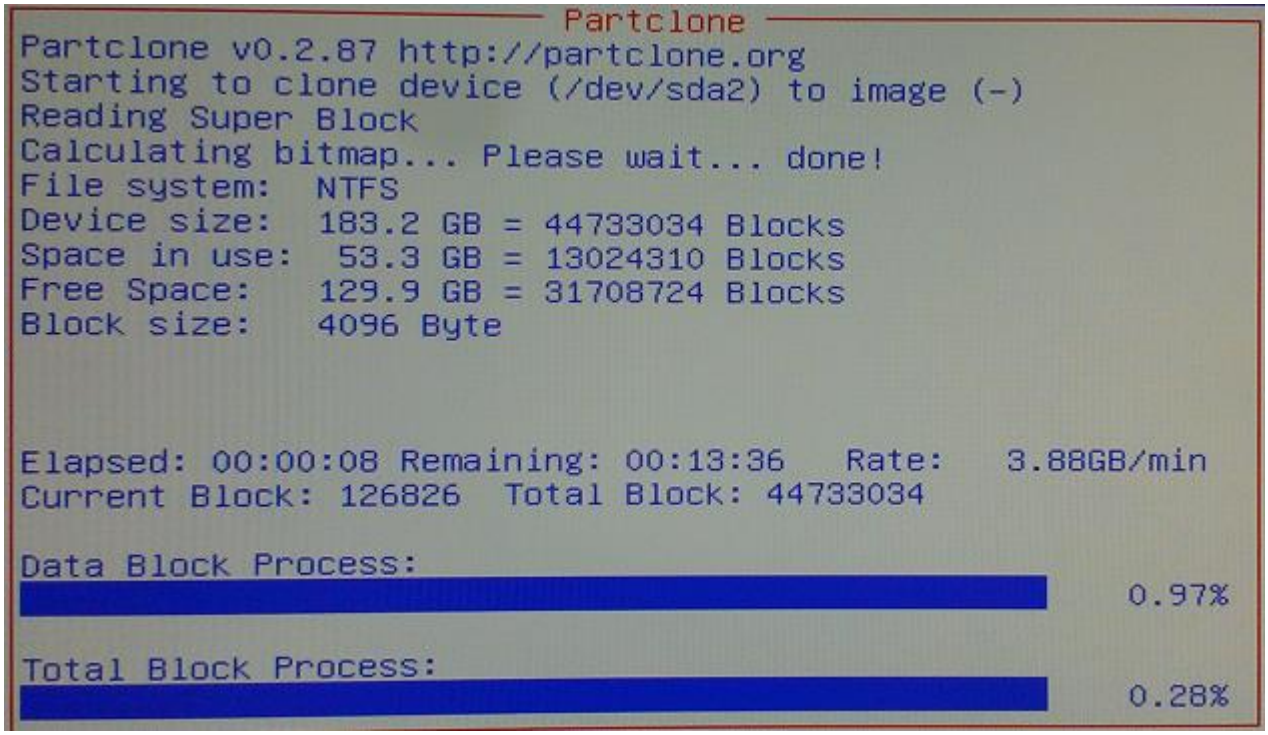


12. Restoring the image to disk

Before starting the image restore, Clonezilla will ask you for confirmation.
Type **Y** and press **Enter**:

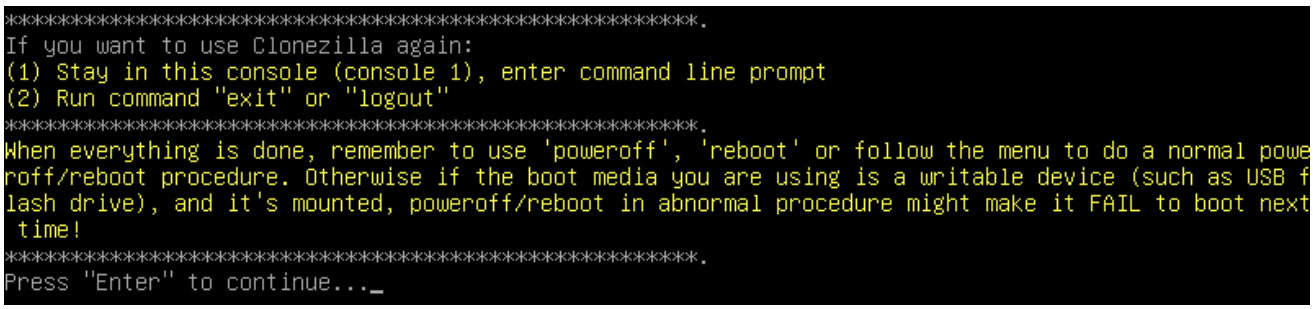


Clonezilla is restoring image to disk:



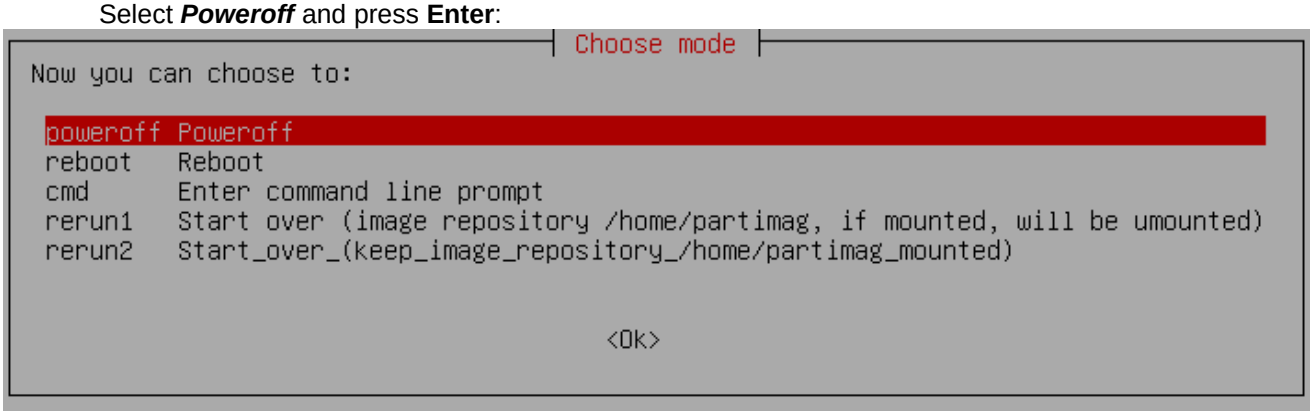
13. Disk image completed

When everything is done, Clonezilla will report and prompt you to continue.
Press **Enter** to continue:



14. Poweroff

Select ***Poweroff*** and press **Enter**:



15. Remove the backup disk (image repository disk)

When the PC is powered off remove the backup disk.