

## Restore disk image

In this example: Restore an image on 2nd disk (sdb) to 1st disk (sda) (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. [Select image name and target disk](#)
11. [Clonezilla is restoring disk image on 2nd disk \(sdb\) to 1st disk \(sda\)](#)

[\[Back to 'Clonezilla Live Doc'\]](#)

- [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. We already have a Clonezilla image in sdb, the image name is called "utopic-x86-20150218":

```
root@debian:~# ls -alFh /home/partimag/
total 32K
drwxr-xr-x 6 root root 4.0K Feb 18 04:18 ./
drwxr-xr-x 4 root root 80 Feb 18 06:54 ../
drwxr-xr-x 2 root root 4.0K Feb 18 03:51 Docs/
drwx----- 2 root root 16K Feb 18 03:50 lost+found/
drwxr-xr-x 2 root root 4.0K Feb 18 03:51 Photos/
drwxr-xr-x 2 root root 4.0K Feb 18 04:19 utopic-x86-20150218/
```

and its contents are:

```
root@debian:~# ls -alFh /home/partimag/utopic-x86-20150218/
total 426M
```

```

drwxr-xr-x 2 root root 4.0K Feb 18 04:19 ./
drwxr-xr-x 6 root root 4.0K Feb 18 04:18 ../
-rw-r--r-- 1 root root 833 Feb 18 04:18 blkdev.list
-rw-r--r-- 1 root root 500 Feb 18 04:18 blkid.list
-rw-r--r-- 1 root root 5.8K Feb 18 04:19 clonezilla-img
-rw-r--r-- 1 root root 174 Feb 18 04:18 dev-fs.list
-rw-r--r-- 1 root root 4 Feb 18 04:18 disk
-rw-r--r-- 1 root root 144K Feb 18 04:18 Info-dmi.txt
-rw-r--r-- 1 root root 38K Feb 18 04:18 Info-lshw.txt
-rw-r--r-- 1 root root 4.6K Feb 18 04:18 Info-lspci.txt
-rw-r--r-- 1 root root 172 Feb 18 04:18 Info-packages.txt
-rw-r--r-- 1 root root 82 Feb 18 04:19 Info-saved-by-cmd.txt
-rw-r--r-- 1 root root 10 Feb 18 04:18 parts
-rw----- 1 root root 424M Feb 18 04:18 sda1.ext4-ptcl-img.gz.aa
-rw----- 1 root root 696K Feb 18 04:18 sda5.ext4-ptcl-img.gz.aa
-rw-r--r-- 1 root root 36 Feb 18 04:18 sda-chs.sf
-rw-r--r-- 1 root root 1.0M Feb 18 04:18 sda-hidden-data-after-mbr
-rw-r--r-- 1 root root 512 Feb 18 04:18 sda-mbr
-rw-r--r-- 1 root root 456 Feb 18 04:18 sda-pt.parted
-rw-r--r-- 1 root root 413 Feb 18 04:18 sda-pt.parted.compact
-rw-r--r-- 1 root root 361 Feb 18 04:18 sda-pt.sf
-rw-r--r-- 1 root root 53 Feb 18 04:18 swappt-sda6.info

```

Now the image "utopic-x86-20150218" will be restored to disk sda.

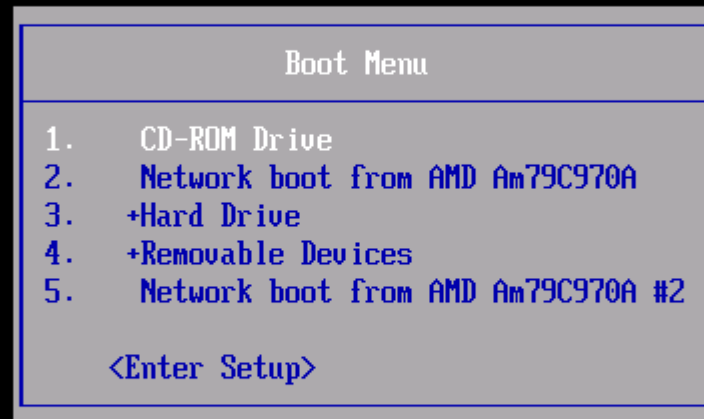
Once you have the bootable Clonezilla Live CD/DVD or USB flash drive, you can boot the machine you want to clone via Clonezilla live.

**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:

PhoenixBIOS Setup Utility									
Main		Advanced		Security		Power		Boot	
								Exit	
CD-ROM Drive Network boot from AMD Am79C970A +Hard Drive +Removable Devices Network boot from AMD Am79C970A #2								Item Specific Help	
								Keys used to view or configure devices: <Enter> expands or collapses devices with a + or - <Ctrl+Enter> expands all <Shift + 1> enables or disables a device. <+> and <-> moves the device up or down. <n> May move removable device between Hard Disk or Removable Disk <d> Remove a device that is not installed.	
F1	Help	↑↓	Select Item	-/+	Change Values	F9	Setup Defaults		
Esc	Exit	↔	Select Menu	Enter	Select ► Sub-Menu	F10	Save and Exit		

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:

clonezilla.org, clonezilla.nchc.org.tw	
Clonezilla live (Default settings, UGA 800x600)	
Other modes of Clonezilla live	>
Local operating system in harddrive (if available)	
Memtest & FreeDOS	>
Network boot via IPXE	

Press [Tab] to edit options

- \* Boot menu for BIOS machine
- \* Clonezilla live version: 2.3.2-22-i686-pae. (C) 2003-2015, NCHC, Taiwan
- \* Disclaimer: Clonezilla comes with ABSOLUTELY NO WARRANTY

# Clonezilla

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Taiwan

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The first one is the default mode for Clonezilla Live. It will default to framebuffer mode with a resolution of 1024x768. There are more modes which you can choose in the 2nd choice "Other modes of Clonezilla live", e.g. 800X600 or 640x480 one if you want, as shown here:

Clonezilla live (Default settings, UGA 1024x768)
Clonezilla live (Default settings, UGA 640x480)
Clonezilla live (Default settings, KMS)
Clonezilla live (To RAM. Boot media can be removed later)
Clonezilla live (Safe graphic settings, vga=normal)
Clonezilla live (Failsafe mode)

Press [Tab] to edit options

UGA mode 1024x768. OK for most of UGA cards.

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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^](#)

```
Loading, please wait...
[   6.806227] sd 32:0:2:0: [sdb] Assuming drive cache: write through
[   6.806231] sd 32:0:0:0: [sda] Assuming drive cache: write through
modprobe: module dm-raid45 not found in modules.dep
INIT: version 2.88 booting
[info] Using makefile-style concurrent boot in runlevel S.
live-config: debconf hostname user-setup sudo locales tzdata keyboard-configurat
util-linux login openssh-server End of live-config jobs.
[ ok ] Starting the hotplug events dispatcher: udevd.
[ ok ] Synthesizing the initial hotplug events...done.
[....] Waiting for /dev to be fully populated...[  12.143327] piix4_smbus 0000:
Controller not enabled!
[  12.516248] intel_rapl: no valid rapl domains found in package 0
[  12.552430] intel_rapl: no valid rapl domains found in package 0
[  12.588468] intel_rapl: no valid rapl domains found in package 0
done.
[ ok ] Assembling MD arrays...done (no arrays found in config file or automatically).
[ ok ] Setting parameters of disc: (none).
[....] Setting preliminary keymap..._
```



- Choose language [^TOP^](#)

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- Choose keyboard layout [^TOP^](#)

### 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>

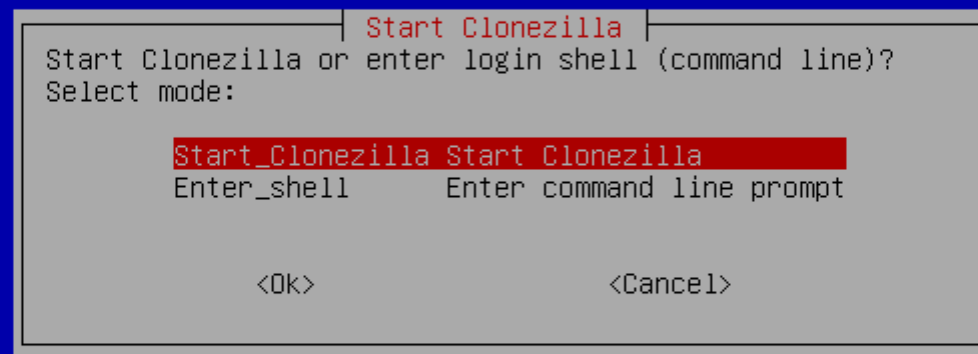
<Cancel>

The default keyboard layout is US keyboard, 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^](#)

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### Clonezilla - Opensource Clone System (OCS)

\*Clonezilla is free (GPL) software, and comes with ABSOLUTELY NO WARRANTY\*

///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///

Two modes are available, you can

- (1) clone/restore a disk or partition using an image
- (2) disk to disk or partition to partition clone/restore.

Select mode:

**device-image work with disks or partitions using images**

device-device work directly from a disk or partition to a disk or partition

<Ok>

<Cancel>

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^](#)

### Mount Clonezilla image directory

Before cloning, you have to assign where the Clonezilla image will be saved to or read from. We will mount that device or remote resources as /home/partimag. The Clonezilla image will be saved to or read from /home/partimag.

Select mode:

local_dev	Use local device (E.g.: hard drive, USB drive)
ssh_server	Use SSH server
samba_server	Use SAMBA server (Network Neighborhood server)
nfs_server	Use NFS server
webdav_server	Use WebDAV server
enter_shell	Enter command line prompt. Do it manually
skip	Use existing /home/partimag (Memory! *NOT RECOMMENDED*)

<Ok>

<Cancel>



There are other options, e.g. sshfs, samba or nfs, 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.

### Mount Clonezilla image directory

Before cloning, you have to assign where the Clonezilla image will be saved to or read from. We will mount that device or remote resources as /home/partimag. The Clonezilla image will be saved to or read from /home/partimag.

Select mode:

local_dev	Use local device (E.g.: hard drive, USB drive)
ssh_server	Use SSH server
samba_server	Use SAMBA server (Network Neighborhood server)
nfs_server	Use NFS server
webdav_server	Use WebDAV server
enter_shell	Enter command line prompt. Do it manually
skip	Use existing /home/partimag (Memory! *NOT RECOMMENDED*)

<Ok>

<Cancel>

ocsroot device is local\_dev

Preparing the mount point /home/partimag...

If you want to use USB device as a Clonezilla image repository, please

\* Insert USB device into this machine \*now\*

\* Wait for about 5 secs

\* Press Enter key

so that the OS can detect the USB device and later we can mount it as /home/partimag.

Press "Enter" to continue.....

- Select sdb1 as image repository, then choose "restoredisk" option [^TOP^](#)

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#### Clonezilla - Opensource Clone System (OCS) | Mode:

Now we need to mount a device as /home/partimag (Clonezilla image(s) repository) so that we can read or save the image in /home/partimag.

///NOTE/// You should NOT mount the partition you want to backup as /home/partimag

The partition name is the device name in GNU/Linux. The first partition in the first disk is "hda1" or "sda1", the 2nd partition in the first disk is "hda2" or "sda2", the first partition in the second disk is "hdb1" or "sdb1"... If the system you want to save is MS windows, normally C: is hda1 (for PATA) or sda1 (for PATA, SATA or SCSI), and D: could be hda2 (or sda2), hda5 (or sda5)...

```
sda1 4.7G_ext4(In_VMware_Virtual_S)_No_disk_serial_no
sda5 2.8G_ext4(In_VMware_Virtual_S)_No_disk_serial_no
sdb1 20G_ext4(In_VMware_Virtual_S)_No_disk_serial_no
```

<Ok>

<Cancel>

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...'

Clonezilla - Opensource Clone System (OCS)

Which directory is for the Clonezilla image (only the first level of directories are shown, and the Clonezilla image (i.e. directory) itself will be excluded. If there is a space in the directory name, it will \_NOT\_ be shown)?:

/	Top_directory_in_the_local_device
Docs	Feb_18
lost+found	Feb_18
Photos	Feb_18

<Ok>

<Cancel>

Then Clonezilla shows you the disk usage report:

```
The file system disk space usage
*****.
Filesystem      Size  Used Avail Use% Mounted on
rootfs          -    -    -    -    /
sysfs           0     0     0    -    /sys
proc            0     0     0    -    /proc
tmpfs           203M  464K  202M   1%    /run
/dev/sr0        163M  163M    0 100% /lib/live/mount/medium
/dev/loop0      127M  127M    0 100% /lib/live/mount/rootfs/filesystem.squashfs
tmpfs           1011M    0 1011M   0% /lib/live/mount/overlay
tmpfs           1011M    0 1011M   0% /lib/live/mount/overlay
aufs            1011M  7.8M 1004M   1%    /
tmpfs           5.0M    0  5.0M   0% /run/lock
pstore          0     0     0    -    /sys/fs/pstore
devtmpfs        10M    0   10M   0% /dev
tmpfs           405M    0  405M   0% /run/shm
devpts          0     0     0    -    /dev/pts
fusectl         0     0     0    -    /sys/fs/fuse/connections
tmpfs           1011M  28K 1011M   1% /tmp
rpc_pipefs      0     0     0    -    /run/rpc_pipefs
/dev/sdb1       20G  896M   18G   5% /tmp/local-dev
/dev/sdb1       20G  896M   18G   5% /home/partimag
*****.
Press "Enter" to continue.....
```

Here we choose "Beginner" mode:

Clonezilla - Opensource Clone System (OCS)

Choose the mode to run the following wizard about advanced parameters:

**Beginner** Beginner mode: Accept the default options

Expert Expert mode: Choose your own options

<Ok>

<Cancel>



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 "restoredisk" option:

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
cvt-img-compression	Convert_image_compression_format_as_another_image
encrypt-img	Encrypt_an_existing_unencrypted_image
decrypt-img	Decrypt_an_existing_encrypted_image
exit	Exit. Enter command line prompt

<Ok>

<Cancel>

- Select image name and target disk [^TOP^](#)

Choose the Clonezilla live image as source image:

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Clonezilla - Opensource Clone System (OCS) | Mode: restoredisk  
Choose the image file to restore:

utopic-x86-20150218 2015-0218-0419\_sda\_8590MB

<Ok>

<Cancel>

Select the target disk "sda" we want to restore:

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Clonezilla - Opensource Clone System (OCS) | Mode: restoredisk

Choose the target disk(s) to be overwritten (ALL DATA ON THE ENTIRE DISK WILL BE LOST AND REPLACED!!)

The disk name is the device name in GNU/Linux. The first disk in the system is "hda" or "sda", the 2nd disk is "hdb" or "sdb"... Press space key to mark your selection. An asterisk (\*) will be shown when the selection is done

sda 8590MB\_VMware\_Virtual\_S\_No\_disk\_serial\_no

<Ok>

<Cancel>

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

Clonezilla - Opensource Clone System (OCS) | Mode: restoredisk

Choose the target disk(s) to be overwritten (ALL DATA ON THE ENTIRE DISK WILL BE LOST AND REPLACED!!)

The disk name is the device name in GNU/Linux. The first disk in the system is "hda" or "sda", the 2nd disk is "hdb" or "sdb"... Press space key to mark your selection. An asterisk (\*) will be shown when the selection is done

sda 8590MB\_VMware\_Virtual\_S\_No\_disk\_serial\_no

<Ok>

<Cancel>

\*\*\*\*\*.

PS. Next time you can run this command directly:

/usr/sbin/ocs-sr -g auto -e1 auto -e2 -c -r -j2 -p true restoredisk utopic-x86-20150218 sda

This command is also saved as this file name for later use if necessary: /tmp/ocs-utopic-x86-20150218-2015-02-18-07-28

\*\*\*\*\*.

Press "Enter" to continue...

Before starting to restore the disk image to disk sda, Clonezilla will ask you to confirm that TWICE:

```
*****.
PS. Next time you can run this command directly:
/usr/sbin/ocs-sr -g auto -e1 auto -e2 -c -r -j2 -p true restoredisk utopic-x86-20150218 sda
This command is also saved as this file name for later use if necessary: /tmp/ocs-utopic-x86-20150218-2015-02-18-07-28
*****.
Press "Enter" to continue...
Activating the partition info in /proc... done!
Getting /dev/sda1 info...
Getting /dev/sda2 info...
Getting /dev/sda5 info...
Getting /dev/sda6 info...
*****.
The following step is to restore an image to the hard disk/partition(s) on this machine: "/home/part
imag/utopic-x86-20150218" -> "sda sda1 sda5"
The image was created at: 2015-0218-0419
WARNING!!! WARNING!!! WARNING!!!
WARNING. THE EXISTING DATA IN THIS HARDDISK/PARTITION(S) WILL BE OVERWRITTEN! ALL EXISTING DATA WILL
BE LOST:
*****.
Machine: VMware Virtual Platform
sda (8590MB_VMWare_Virtual_S_No_disk_serial_no)
sda1 (4.7G_ext4(In_VMWare_Virtual_S)_No_disk_serial_no)
sda5 (2.8G_ext4(In_VMWare_Virtual_S)_No_disk_serial_no)
*****.
Are you sure you want to continue? (y/n) y_
```



```
Press "Enter" to continue...
Activating the partition info in /proc... done!
Getting /dev/sda1 info...
Getting /dev/sda2 info...
Getting /dev/sda5 info...
Getting /dev/sda6 info...
*****.
The following step is to restore an image to the hard disk/partition(s) on this machine: "/home/part
imag/utopic-x86-20150218" -> "sda sda1 sda5"
The image was created at: 2015-0218-0419
WARNING!!! WARNING!!! WARNING!!!
WARNING. THE EXISTING DATA IN THIS HARDDISK/PARTITION(S) WILL BE OVERWRITTEN! ALL EXISTING DATA WILL
BE LOST:
*****.
Machine: VMware Virtual Platform
sda (8590MB_VMWare_Virtual_S_No_disk_serial_no)
sda1 (4.7G_ext4(In_VMWare_Virtual_S)_No_disk_serial_no)
sda5 (2.8G_ext4(In_VMWare_Virtual_S)_No_disk_serial_no)
*****.
Are you sure you want to continue? (y/n) y
OK, let's do it!!
This program is not started by clonezilla server.
*****.
Let me ask you again.
The following step is to restore an image to the hard disk/partition(s) on this machine: "/home/part
imag/utopic-x86-20150218" -> "sda sda1 sda5"
The image was created at: 2015-0218-0419
WARNING!!! WARNING!!! WARNING!!!
WARNING. THE EXISTING DATA IN THIS HARDDISK/PARTITION(S) WILL BE OVERWRITTEN! ALL EXISTING DATA WILL
BE LOST:
*****.
Machine: VMware Virtual Platform
sda (8590MB_VMWare_Virtual_S_No_disk_serial_no)
sda1 (4.7G_ext4(In_VMWare_Virtual_S)_No_disk_serial_no)
sda5 (2.8G_ext4(In_VMWare_Virtual_S)_No_disk_serial_no)
*****.
Are you sure you want to continue? (y/n) y_
```

- Clonezilla is restoring disk image on 2nd disk (sdb) to 1st disk (sda) [^TOP^](#)

Clonezilla now is restoring the selected disk image to 1st disk (sda). The job is done by restoring:

- MBR (by dd), and Boot loader (by grub)
- Partition table (by sfdisk).
- Data on every partition or LV (logical volume) (by partimage, ntfsclone, partclone or dd. It depends on the image of each partition or LV.)

```
sfdisk: Warning: partition 2 does not end at a cylinder boundary
sfdisk: Warning: partition 5 does not end at a cylinder boundary
sfdisk: Warning: partition [6] does not start at a cylinder boundary
sfdisk: Warning: partition [6] does not end at a cylinder boundary
sfdisk: Warning: partition 6 does not end at a cylinder boundary
```

Disk /dev/sda: 1044 cylinders, 255 heads, 63 sectors/track

Old situation:

Units: cylinders of 8225280 bytes, blocks of 1024 bytes, counting from 0

Device	Boot	Start	End	#cyls	#blocks	Id	System
/dev/sda1		0	-	0	0	0	Empty
/dev/sda2		0	-	0	0	0	Empty
/dev/sda3		0	-	0	0	0	Empty
/dev/sda4		0	-	0	0	0	Empty

New situation:

Units: sectors of 512 bytes, counting from 0

Device	Boot	Start	End	#sectors	Id	System
/dev/sda1	*	2048	9764863	9762816	83	Linux
/dev/sda2		9766910	16775167	7008258	5	Extended
/dev/sda3		0	-	0	0	Empty
/dev/sda4		0	-	0	0	Empty
/dev/sda5		9766912	15624191	5857280	83	Linux
/dev/sda6		15626240	16775167	1148928	82	Linux swap / Solaris

Successfully wrote the new partition table

sfdisk: If you created or changed a DOS partition, /dev/foo7, say, then use dd(1)  
to zero the first 512 bytes: dd if=/dev/zero of=/dev/foo7 bs=512 count=1  
(See fdisk(8).)

Re-reading the partition table ...

This was done by sfdisk --force /dev/sda < /home/partimag/utopic-x86-20150218/sda-pt.sf  
Checking the integrity of partition table in the disk /dev/sda...

\*\*\*\*\*.

No volume groups found

Informing the OS of partition table changes....

### Partclone

Partclone v0.2.76 <http://partclone.org>  
Starting to restore image (-) to device (/dev/sda1)  
Calculating bitmap... Please wait... done!  
File system: EXTFS  
Device size: 5.0 GB = 1220352 Blocks  
Space in use: 1.4 GB = 339636 Blocks  
Free Space: 3.6 GB = 880716 Blocks  
Block size: 4096 Byte

Elapsed: 00:00:02 Remaining: 00:00:08 Rate: 8.18GB/min  
Current Block: 145900 Total Block: 1220352

Data Block Process:  
 19.60%

Total Block Process:  
 11.96%

### Partclone

Partclone v0.2.76 <http://partclone.org>  
Starting to restore image (-) to device (/dev/sda5)  
Calculating bitmap... Please wait... done!  
File system: EXTFS  
Device size: 3.0 GB = 732160 Blocks  
Space in use: 118.7 MB = 28976 Blocks  
Free Space: 2.9 GB = 703184 Blocks  
Block size: 4096 Byte

Total Time: 00:00:02 Remaining: 00:00:00  
Ave. Rate: 3.47GB/min

Data Block Process:  
 100.00%

Total Block Process:  
 100.00%

When everything is done, Clonezilla will prompt you if you want to run it again,

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

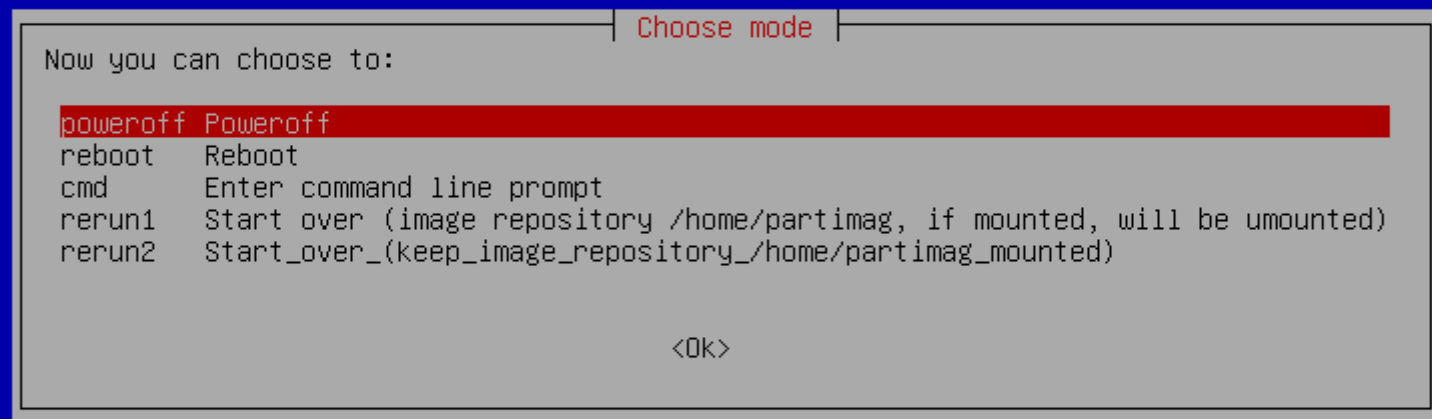
```
Found boot loader grub in the MBR of disk /dev/sda.
Found grub 2 installed in the restored OS.
Test if we can chroot the restored OS partition /dev/sda1...
Yes, we are able to chroot the restored OS partition /dev/sda1.
Trying to use the grub2 in the restored OS...
Running: run_grub2_from_restored_os "/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...
Installing for i386-pc platform.
Installation finished. No error reported.
done!
*****.
Running: run_ntfsreloc_part -p "sda1 sda5" auto
The NTFS boot partition was not found or not among the restored partition(s). Skip running partclone.ntfsfixboot.
*****.
End of restoreparts job for image utopic-x86-20150218.
End of restoredisk job for image utopic-x86-20150218.
*****
*****
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 2015-02-18 07:30:43 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..._
```

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)





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.

```
The next step: poweroff
Trying to unmount /home/partimag... done!
Trying to unmount /tmp/local-dev... done!
Will poweroff... 5 4 3 2 1
Broadcast message from root@debian (tty1) (Wed Feb 18 07:34:18 2015):

The system is going down for system halt NOW!
INIT: Switching to runlevel: 0
INIT: Sending processes the TERM signal
[info] Using makefile-style concurrent boot in runlevel 0.
[ ok ] Stopping mouse interface server: gpm.
[ ok ] Unmounting iscsi-backed filesystems: Unmounting all devices marked _netdev.
[ ok ] Asking all remaining processes to terminate...done.
[ ok ] All processes ended within 2 seconds...done.
[ ok ] Stopping enhanced syslogd: rsyslogd.
rpcbind: rpcbind terminating on signal. Restart with "rpcbind -w"
[ ok ] Stopping rpcbind daemon....
[ ok ] Deconfiguring network interfaces...done.
[ ok ] Stopping NFS common utilities: idmapd statd.
[ ok ] Unmounting temporary filesystems...done.
[ ok ] Deactivating swap...done.
[ ok ] Stopping remaining crypto disks...done.
[ ok ] Stopping early crypto disks...done.
live-boot: caching reboot files...

Please remove the disc, close the tray (if any) and press ENTER to continue: _
```

That's all. The 1st disk (sda) is ready to be used.