

Clonezilla Live on RISC-V

(Part 2)

From Porting to Mass Deployment

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Outline

- Introduction to Clonezilla
- RISC-V Architecture & Clonezilla live
- Massive Deployment via Multicast/Bittorrent
- Q&A



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System imaging and cloning - backup



You want to crash!!!
I show you how to crash!!!

image source: maggiesfarm.anotherdotcom.com
www.compsults.com, and jervisdabreo.com



Massive system deployment



What is Clonezilla?

- A partition and disk imaging/cloning utility similar to True image® or Ghost®. GPL license
- Clonezilla live uses Debian/Ubuntu as underlying OS
- A bare metal recovery tool for



*1



*2



*3



*4

VMFS

VMware
ESX/ESXi

*5



*6

*Logo source: (1) Larry Ewing, Simon Budig and Anja Gerwinski, (2) Apple, (3) Microsoft, (4) Marshall Kirk McKusick, (5) VMWare (6) Distrowatch.com



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RISC-V Architectures

- Open Source (Creative Commons or BSD).
Introduced in 2014
- 32-bit & 64-bit
- U. C. Berkeley -> RISC-V Foundation -> RISC-V International
- Vendors: SiFive, Andes, Ventana...
- Linux kernel support was from V5.17 in 2022.
Debian Supports riscv64 started in 2023.



Images source: wikipedia.org



Clonezilla Live for RISC-V

- Live system based on Debian Linux. Use Live-build from Debian to create it.
 - riscv64 still needs to be patched
 - https://salsa.debian.org/live-team/live-build/-/merge_requests/383
- Experimental releases are available
 - <https://free.nchc.org.tw/clonezilla-live/experimental/>

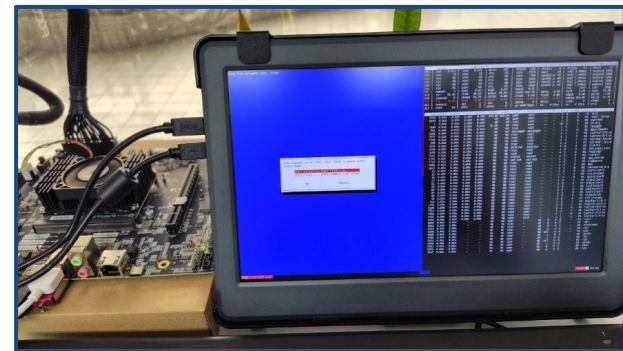


Status about Clonezilla Live for RISC-V

- Clonezilla live riscv64 release after started in 2024/Q4
- Current status :
 - Works well with Emulator (QEMU)
 - Tested OK for physical machine
 - DC-ROMA RISC-V LAPTOP II
 - SiFive P550



Image source: store.deepcomputing.io



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Massive Deployment

- Prepare Clonezilla Live
- Experiments - 4 scenarios
 - Steps
 - Screenshots
 - Results



Before You Begin – Make the Boot Medium

Important: All commands that write to storage devices must be run with `sudo`. Replace `/dev/mmcblk0` with your actual micro-SD card device name (check with `lsblk`).



Step 1: Download the Image . Write to Micro-SD Card

`wget`

<https://free.nchc.org.tw/clonezilla-riscv/DC-ROMA-L2A/clonezilla-live-riscv-latest.img>

```
sudo dd if=clonezilla-live-riscv-latest.img of=/dev/mmcblk0 bs=1024M conv=fsync  
status=progress
```



Optional Step: Customize Boot Parameters

1

Mount Partition 5

```
sudo mount /dev/mmcblk0p5 /mnt/tmp
```

2

Edit Environment File

```
sudo vi /mnt/tmp/env_k1-x.txt
```

3

Unmount

```
sudo umount /mnt/tmp
```



Experiments - 4 types

- ❑ Goal
 - ❑ Measurement of Mass Deployment
- ❑ 4 scenarios

Mass Deployment Scenarios			
		Deployment Source	
		Image	Device
Deployment Protocol	BT	A.1 : BT/image	A.2 : BT/dev
	Multicast (MCast)	B.1 : MCast/image	B.2 : MCast/dev



Hardware Specifications

- Machine : DC-ROMA L2A x2
- Network connection :
 - GB Switch : PCI FXG-08MK
 - USB 3.0 network device : Tek Republic TUN-300



Software Specifications

- repack-raw_info.txt

=== Repack Info ===

```
* Date : 2026-03-03 14:13:32
* OCS-live-ubrd Version : 1.0.2-1
* U-Boot ENV Version : 1.0.5
* Original OCS Zip : d5cf3a8b869cc1de46ae8e0aa6b75669 ./clonezilla-live-3.3.1-37-
riscv64-k6.6.63.zip
* Template Image : 60fbd495b537825dabb062c60eb30649 ./bootable.ocs-v1014.img
* Loop Device : /dev/loop7
* Bootfs / ENV Mapper : /dev/mapper/loop7p5 / /dev/mapper/loop7p2
* Full Self Command : /usr/sbin/ocs-live-gen-ubrd ./clonezilla-live-3.3.1-37-riscv64-
k6.6.63.zip -bt ./bootable.ocs-v1014.img
=== End of info ===
```

- Clonezilla-Live-Version

clonezilla-live-3.3.1-37-riscv64

This Clonezilla live zip file was created by this command:

```
ocs-live-dev -c -s --extra-boot-param quiet loglevel=3 hostname=cl-3.3.1-37 -y 6.03 -g en_US.UTF-8 -k en -i 3.3.1-37-
riscv64
```

Repack 'clonezilla-live-3.3.1-37-riscv64.zip' -> 'clonezilla-live-3.3.1-37-riscv64-k6.6.63.zip' via the follow command:

```
/usr/sbin/ocs-live-swap-kernel clonezilla-live-3.3.1-37-riscv64.zip linux-image-6.6.63_6.6.63-
2.2.7.3+20250828010738_riscv64.deb bianbu-esos_0.0.10_riscv64.deb
```

free.nhcg.org.tw/clonezilla-riscv/DC-ROMA-L2A/

Index of /clonezilla-riscv/DC-ROMA-L2A

Name	Last modified
Parent Directory	
MD5SUM.txt	2026-04-21 13:56
README.txt	2025-10-20 15:20
bootable-img.template/	2025-10-17 13:01
clonezilla-live-3.3.0-27-riscv64-k6.6.63_u-bootable.img	2025-10-17 12:58
clonezilla-live-3.3.0-27-riscv64-k6.6.63_u-bootable.v20251015.img	2025-10-15 16:22
clonezilla-live-3.3.0-33-riscv64-k6.6.63.zip	2025-10-20 08:41
clonezilla-live-3.3.0-33-riscv64-k6.6.63_u-bootable.img	2025-10-20 14:28
clonezilla-live-3.3.1-37-riscv64-k6.6.63.zip	2026-03-03 14:10
clonezilla-live-3.3.1-37-riscv64-k6.6.63_u-bootable.img	2026-03-03 14:13
clonezilla-live-riscv-latest.img	2025-10-20 14:28
clonezilla-live-riscv-latest.zip	2025-10-20 08:41
old/	2025-10-22 09:27



Source Machine Disk Specifications

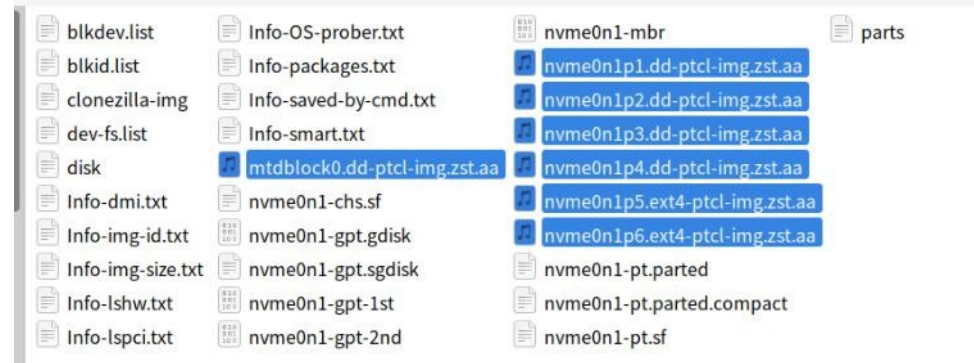
Deployment Source :

- Device :
 - /dev/nvme0n1
 - Include : /dev/mtdblock0
- Image :
 - Saved from /dev/nvme0n1
 - Include : mtdblock0.dd

```
Found valid GPT with protective MBR; using GPT.
Disk /dev/nvme0n1: 2000409264 sectors, 953.9 GiB
Model: 1TB SSD
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): 6CA4601D-DA33-4934-A322-7D54576C0EF5
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 2000409230
Partitions will be aligned on 256-sector boundaries
Total free space is 1374 sectors (687.0 KiB)
```

Number	Start (sector)	End (sector)	Size	Code	Name
1	256	767	256.0 KiB	0700	fsbl
2	768	895	64.0 KiB	0700	env
3	2048	4095	1024.0 KiB	0700	opensbi
4	4096	8191	2.0 MiB	0700	uboot
5	8192	532479	256.0 MiB	0700	bootfs
6	532480	2000409230	953.6 GiB	0700	rootfs

i:/home/partimag/2025-10-20-slurm-worker

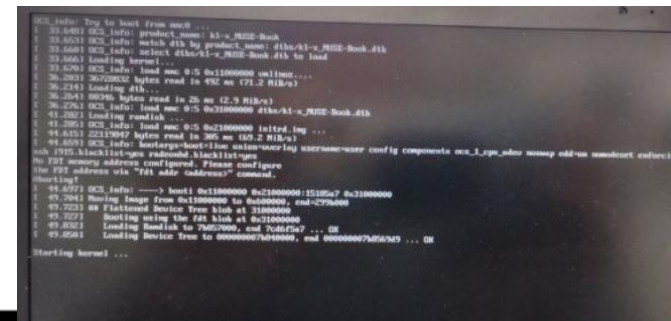
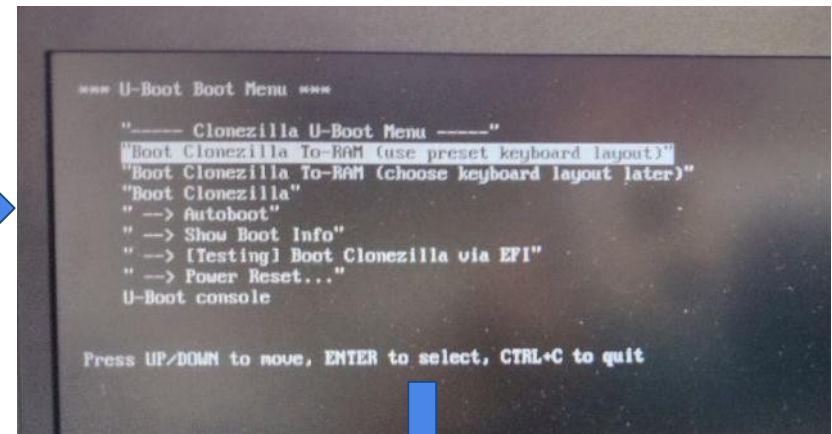


Steps

1. Create a bootable micro-SD card for DC-ROMA

Refer : <https://free.nchc.org.tw/clonezilla-riscv/DC-ROMA-L2A/README.txt>

2. Boot up ROMA (both server & client) by Clonezilla live with "To Ram" mode



Steps (cont's)

3. Setup environment:

1. Network connection (both @server & @client)
2. Image repository (/home/partimag/\$IMAGE_NAME): Scenarios A.1 and B.1

4. Prepare Clonezilla server

1. Via TUI (with extra parameters : default with -rmtb , -rmmcb)

```
Clonezilla Free Software Lab, Taiwan
Clonezilla advanced extra parameters | Mode: disk-to-disks
Set the following parameters (multiple choices are available). If you are unsure, keep the default values by pressing Enter. (If multiple choices are available, press the space key to mark your selection. An asterisk (*) will appear next to your selection.)

| -u      Select the image to restore on the client (unicast restoring only)
| -t      Client skips restoring the MBR (Master Boot Record)
| -t1     Client restores the prebuilt bootloader from syslinux (for Windows only)
| -t2     Client skip restoring the EBR (Extended Boot Record)
| -r      Try to resize the filesystem to fit the partition size
| -ns     Put ntfsclone temporary files in the image directory on the server
| -e      sfdisk uses the CHS value from the saved image
| -icrc   Ignore partclone CRC checking
| -isbr   Do not remove Linux udev hardware records after restoring.
| -irvd   Do not remove NTFS volume dirty flag after it is restored.
| -ius    Do not update syslinux-related files after restoring.
| -iui    Do not update initramfs file(s) on the restored GNU/Linux.
| -icds   Skip checking destination disk size before creating the partition table
| -iefi   Skip updating boot entries in EFI NVRAM after restoring
| -j1     Rewrite MBR (512 B) again after image restore. (Not recommended if the partition table differs from that of the image.)
| -j2     Clone the hidden data between the MBR and the first partition
| -cm     Check image using MD5 checksums
| -cs     Check image using SHA1 checksums
| -cb2    Check image by BLAKE2 checksums
| -cb3    Check image by BLAKE3 checksums
| -cmf    Inspect checksum for files in device after restoring
| -f      Restart the NFS service
| -rescue Continue to the next block on disk read errors
| -s      Client skips hardware detection when booting
| -a      Do NOT force HD DMA to be turned on
| -o0     Run script in $OCS_PRERUN.DIR before cloning starts
| -o1     Run script in $OCS_POSTRUN.DIR after cloning finishes
| -srel   Save restore error log in the image directory
| -ssnf   Skip setting 1st boot device as network in uEFI netboot client NVRAM
| -ps     Play sound when the job is done
| -edio   Enable Partclone's direct I/O mode for NVMe SSDs
| -rmtb   Restore MTD block device (/dev/mtdblock*)
| -rmmcb  Restore mMC boot device (/dev/mmcblk*boot*)
| -reluc  Recover LUKS encrypted volumes (change master key) in the destination device
```



Steps (@Server cont's)

4.2 Launch Clonezilla server for 4 scenarios (Via direct CLI)

extra parameters : default with -rmtb , -rmmcb

A.1 (BT from image) :

```
~$ sudo ocs-live-feed-img -cbm local-boot-media -dm no-dhcpd -lscm massive-  
deployment -mdst from-image -g auto -e1 auto -e2 -x -j2 -edio -rmtb -rmmcb -k0 -sc0  
-p true -md bittorrent start "2025-10-20-slurm-ctl" nvme0n1
```

A.2 (BT from device) :

```
~$ sudo ocs-live-feed-img -cbm local-boot-media -dm no-dhcpd -lscm massive-  
deployment -mdst from-device -cdt disk-2-mdisks -bsdf sfsck -g auto -e1 auto -e2 -x -  
nogui -j2 -edio -rmtb -rmmcb -k0 -p true -md bittorrent start "nvme0n1" nvme0n1
```

```
Starting /usr/sbin/ocs-sr at 2025-04-21 16:17:06 CST...  
.....  
Clonezilla image dir: /home/partimg  
.....  
Shutting down the Logical Volume Manager  
Finished Shutting down the Logical Volume Manager  
The image name is: raw-psdo-20260421-161705  
Selected device [nvme0n1] found!  
The selected devices: nvme0n1  
.....  
Activating the partition info in /proc... done!  
Selected device [nvme0n1] found!  
The selected devices: nvme0n1  
Searching for data/swap/extended partition(s)....  
Finding all disks and partitions...  
Excluding busy partition....  
Excluding linux raid member partition.....  
Unmounted partitions (including extended or swap): nvme0n1p1 nvme0n1p2 nvme0n1p3 nvme0n1p4 nvme0n1p5 nvme0n1p6  
Collecting info..... done!  
The data partition to be saved: nvme0n1p1 nvme0n1p2 nvme0n1p3 nvme0n1p4 nvme0n1p5 nvme0n1p6  
Activating the partition info in /proc... done!  
Searching MTD block (/dev/mtdblock*) and eMMC boot (/dev/mmcblk*boot*) devices... done!  
Selected device [nvme0n1p1] found!  
Selected device [nvme0n1p2] found!  
Selected device [nvme0n1p3] found!  
Selected device [nvme0n1p4] found!  
Selected device [nvme0n1p5] found!  
Selected device [nvme0n1p6] found!  
Selected device [mtdblock0] found!  
The selected devices: nvme0n1p1 nvme0n1p2 nvme0n1p3 nvme0n1p4 nvme0n1p5 nvme0n1p6 mtdblock0
```

BT from device



Steps (@Server cont's)

4. Launch Clonezilla server

extra parameters : default with -rmtb , -rmmcb

B.1 (MCast from image) :

```
~$ sudo ocs-live-feed-img -cbm local-boot-media -dm no-dhcpd -lscm massive-  
deployment -mdst from-image -g auto -e1 auto -e2 -x -nogui -j2 -edio -rmtb -rmmcb -  
k0 -sc0 -p true -md multicast --clients-to-wait 1 --max-time-to-wait 300 start "2025-10-  
20-slurm-ctl" nvme0n1
```

B.2 (MCast from image) :

```
~$ sudo ocs-live-feed-img -cbm local-boot-media -dm no-dhcpd -lscm massive-  
deployment -mdst from-device -cdt disk-2-mdisks -bsdf sfsck -g auto -e1 auto -e2 -x -  
nogui -j2 -edio -rmtb -rmmcb -k0 -p true -md multicast --clients-to-wait 1 --max-time-  
to-wait 300 start "nvme0n1" nvme0n1
```



Steps (@Client)

5. Launch deployment procedure on client

Just run :

sudo ocs-live-get-img 192.168.0.108

Optional : Clean up /dev/mtdblock0 before restore

***for i in mtdblock0 nvme0n1p1 nvme0n1p2 nvme0n1p3
nvme0n1p4 nvme0n1p5 nvme0n1p6; \
do dd if=/dev/zero of=/dev/\${i} bs=1M count=10 ;\
done***



Screenshots :

A.1 (BT from Image, @server)

- Preparing image slice files for BT (nvme0n1*, mtddb0)

```
Create the image files for BT if they do not exist...
Preparing image slice files for BT use: /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3/
( for img in $(ls /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3.do-ptcl.img.zst.*; do cat $img; done ) | zstd -dc -T0 2> /tmp/unzip_stdin_cmd_error.87XND7 | LC_ALL=C partclone.dd -d -s -S 1
685756 --offsets -z 1677216 -o /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3
Partclone v0.3.44 http://partclone.org
Starting to dd image (-) to block files (/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3)
Calculating hitmap... Please wait... done!
File system: raw
Device size: 1.8 MB = 2048 Blocks
Space to use: 1.8 MB = 2048 Blocks
Free Space: 0 Byte = 0 Blocks
Block size: 512 Byte
Elapsed: 00:00:00, Remaining: 00:00:00, Completed: 100.00%, Rate: 31.40MB/min.
Current block: 2048, Total block: 2048, Complete: 100.00%
Total Time: 00:00:02, Ave. Rate: 31.40MB/min, 100.00% completed
Syncing... OK!
Cloned successfully.

Create the image files for BT if they do not exist...
Preparing image slice files for BT use: /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4/
( for img in $(ls /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4.do-ptcl.img.zst.*; do cat $img; done ) | zstd -dc -T0 2> /tmp/unzip_stdin_cmd_error.pJhV1 | LC_ALL=C partclone.dd -d -s -S 2
687152 --offsets -z 1677216 -o /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4
Partclone v0.3.44 http://partclone.org
Starting to dd image (-) to block files (/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4)
Calculating hitmap... Please wait... done!
File system: raw
Device size: 2.1 MB = 4096 Blocks
Space to use: 2.1 MB = 4096 Blocks
Free Space: 0 Byte = 0 Blocks
Block size: 512 Byte
Elapsed: 00:00:02, Remaining: 00:00:00, Completed: 100.00%, Rate: 62.93MB/min.
Current block: 4096, Total block: 4096, Complete: 100.00%
Total Time: 00:00:02, Ave. Rate: 62.93MB/min, 100.00% completed
Syncing... OK!
Cloned successfully.

Create the image files for BT if they do not exist...
grep: /home/partimag/2025-10-20-slurm-worker/.git: No such file or directory
grep: /home/partimag/2025-10-20-slurm-worker/.git: No such file or directory
Preparing image slice files for BT use: /home/partimag/btzone/2025-10-20-slurm-worker/mtddb0/
( for img in $(ls /home/partimag/btzone/2025-10-20-slurm-worker/mtddb0.do-ptcl.img.zst.*; do cat $img; done ) | zstd -dc -T0 2> /tmp/unzip_stdin_cmd_error.s7WpY | LC_ALL=C partclone.dd -d -s -S 5
6388688 --offsets -z 1677216 -o /home/partimag/btzone/2025-10-20-slurm-worker/mtddb0
Partclone v0.3.44 http://partclone.org
Starting to dd image (-) to block files (/home/partimag/btzone/2025-10-20-slurm-worker/mtddb0)
Calculating hitmap... Please wait... done!
File system: raw
Device size: 8.4 MB = 16384 Blocks
Space to use: 8.4 MB = 16384 Blocks
Free Space: 0 Byte = 0 Blocks
Block size: 512 Byte
Elapsed: 00:00:02, Remaining: 00:00:00, Completed: 100.00%, Rate: 251.60MB/min.
Current block: 16384, Total block: 16384, Complete: 100.00%
Total Time: 00:00:02, Ave. Rate: 251.60MB/min, 100.00% completed
Syncing... OK!
Cloned successfully.
```

- Generate metainfo file (nvme0n1*, mtddb0)

```
Generate metainfo file /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p1.torrent by:
partclone create torrent.py -s nvme0n1p1 -t http://192.168.8.188-095/announce -o clonezilla -i "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p1.torrent.info" -s "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p1.torrent"
/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p1.torrent created successfully

Start tracker by:
spectracker -p 6988 -d "/home/partimag/btzone/2025-10-20-slurm-worker" -w /etc/spectracker/whitelist.txt -s "/var/log/clonezilla/2025-10-20-slurm-worker-nvme0n1p1-tracker.log" 2d42 &
Waiting for port 6988 of tracker to be started successfully... done!

Generate metainfo file /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p2.torrent by:
partclone create torrent.py -s nvme0n1p2 -t http://192.168.8.188-095/announce -o clonezilla -i "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p2.torrent.info" -s "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p2.torrent"
/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p2.torrent created successfully

Start tracker by:
spectracker -p 6971 -d "/home/partimag/btzone/2025-10-20-slurm-worker" -w /etc/spectracker/whitelist.txt -s "/var/log/clonezilla/2025-10-20-slurm-worker-nvme0n1p2-tracker.log" 2d42 &
Waiting for port 6971 of tracker to be started successfully... done!

Generate metainfo file /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3.torrent by:
partclone create torrent.py -s nvme0n1p3 -t http://192.168.8.188-095/announce -o clonezilla -i "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3.torrent.info" -s "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3.torrent"
/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3.torrent created successfully

Start tracker by:
spectracker -p 6973 -d "/home/partimag/btzone/2025-10-20-slurm-worker" -w /etc/spectracker/whitelist.txt -s "/var/log/clonezilla/2025-10-20-slurm-worker-nvme0n1p3-tracker.log" 2d42 &
Waiting for port 6973 of tracker to be started successfully... done!

Generate metainfo file /home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4.torrent by:
partclone create torrent.py -s nvme0n1p4 -t http://192.168.8.188-095/announce -o clonezilla -i "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4.torrent.info" -s "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4.torrent"
/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4.torrent created successfully

Start tracker by:
spectracker -p 6975 -d "/home/partimag/btzone/2025-10-20-slurm-worker" -w /etc/spectracker/whitelist.txt -s "/var/log/clonezilla/2025-10-20-slurm-worker-nvme0n1p4-tracker.log" 2d42 &
Waiting for port 6975 of tracker to be started successfully... done!
```

- Start seeding

```
Start seeding by:
ocs-ez10-seeder -m img "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p1.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker" "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p2.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker" "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker" "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker" "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p5.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker" "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p6.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker" "/home/partimag/btzone/2025-10-20-slurm-worker/mtddb0.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker" 2>&1
10 9 8 7 6 5 4 3 2 1
*****
Running: ez10 add torrent.py -s -c -u 5 "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p1.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker"
Running: ez10 add torrent.py -s -c -u 5 "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p2.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker"
Running: ez10 add torrent.py -s -c -u 5 "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p3.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker"
Running: ez10 add torrent.py -s -c -u 5 "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p4.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker"
Running: ez10 add torrent.py -s -c -u 5 "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p5.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker"
Running: ez10 add torrent.py -s -c -u 5 "/home/partimag/btzone/2025-10-20-slurm-worker/nvme0n1p6.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker"
Running: ez10 add torrent.py -s -c -u 5 "/home/partimag/btzone/2025-10-20-slurm-worker/mtddb0.torrent" "/home/partimag/btzone/2025-10-20-slurm-worker"
ez10 seeding status output for 2025-10-20-slurm-worker/mtddb0.torrent will be in "/var/log/clonezilla/ez10-seeding.log". Use "tail -f /var/log/clonezilla/ez10-seeding.log" to check the status.
*****
```



Screenshots :

A.1 (BT from Image, @client)

RUN:

~\$ sudo time ocs-live-get-img 192.168.0.108

```
EZIO v2.0.21
Press [h] for help | [q] Quit | Arrow/PgUp/PgDn: Scroll
Sort: Path ▲ | Filter: All | Verbose: OFF

-----
11 %
D: 3.97GB/min, 67.80MB/s | U: 0.00GB/min, 0.00MB/s | ETA: 0:05:28

/dev/mtdblock0: d6e8aae9ee4f114ebeb78855790617105331925
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: S][P: 0][T: 0:00:41][L: -00:00:01]
[PD: 0.00MB] / [PU: 0.00B] [FT: 0:00:40]

-----
/dev/nvme0n1p1: ba390d22dcc5a841dd8e9db89a3f5cbc4f83748e
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: S][P: 0][T: 0:00:52][L: -00:00:01]
[PD: 256.00KB] / [PU: 0.00B] [FT: 0:00:52]

-----
/dev/nvme0n1p2: d14fae3c9cca9a3f37b2cce9b06e7cf14c970f3
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: S][P: 0][T: 0:00:51][L: -00:00:01]
[PD: 64.00KB] / [PU: 0.00B] [FT: 0:00:50]

-----
/dev/nvme0n1p3: 68e81a8834d17c65c836d9bac827917a6afdcd7a
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: S][P: 0][T: 0:00:49][L: -00:00:01]
[PD: 1.00MB] / [PU: 0.00B] [FT: 0:00:49]

-----
/dev/nvme0n1p4: 501d206525f3571e5e7804ed26abc232d708a96b
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: S][P: 0][T: 0:00:47][L: -00:00:01]
[PD: 2.00MB] / [PU: 0.00B] [FT: 0:00:47]

-----
/dev/nvme0n1p5: 36a3491efb3ca8a8e676593502623253917875fd
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: S][P: 0][T: 0:00:45][L: -00:00:01]
[PD: 74.18MB] / [PU: 0.00B] [FT: 0:00:44]

-----
/dev/nvme0n1p6: 1e6246e8d9d230a9e3c111547a3234215d6cacf
11 %
D: 3.97GB/min, 67.80MB/s | U: 0.00GB/min, 0.00MB/s
[S: D][P: 1][T: 0:00:43][L: -00:00:01]
[PD: 2.73GB] / [PU: 0.00B] [FT: 0:00:00]
```



Screenshots :

A.2 (BT from Device , @server/client)

```
Start tracker by:
opentracker -p 6981 -d "/home/partimag/btzone/raw-psdo-20251229-170630" -w /etc/opentracker/whitelist.txt > "/var/log/clonezilla//w
u-psdo-20251229-170630-mtdblock0-tracker.log" 2>&1 &
Waiting for port 6981 of tracker to be started successfully... done!
*****
Start seeding by:
ocs-ezio-seeder "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p1.torrent" /dev/nvme0n1p1 "/home/partimag/btzone/raw-psdo-
20251229-170630/nvme0n1p2.torrent" /dev/nvme0n1p2 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p3.torrent" /dev/nvme0n1p3
"/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p4.torrent" /dev/nvme0n1p4 "/home/partimag/btzone/raw-psdo-20251229-170630/nv
me0n1p5.torrent" /dev/nvme0n1p5 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p6.torrent" /dev/nvme0n1p6 "/home/partimag/bt
zone/raw-psdo-20251229-170630/mtdblock0.torrent" /dev/mtdblock0 2>&1
10 9 8 7 6 5 4 3 2 1
*****
Running: ezio_add_torrent.py -s -c 6 -u 5 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p1.torrent" "/dev/nvme0n1p1"
Running: ezio_add_torrent.py -s -c 6 -u 5 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p2.torrent" "/dev/nvme0n1p2"
Running: ezio_add_torrent.py -s -c 6 -u 5 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p3.torrent" "/dev/nvme0n1p3"
Running: ezio_add_torrent.py -s -c 6 -u 5 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p4.torrent" "/dev/nvme0n1p4"
Running: ezio_add_torrent.py -s -c 6 -u 5 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p5.torrent" "/dev/nvme0n1p5"
Running: ezio_add_torrent.py -s -c 6 -u 5 "/home/partimag/btzone/raw-psdo-20251229-170630/nvme0n1p6.torrent" "/dev/nvme0n1p6"
Running: ezio_add_torrent.py -s -c 6 -u 5 "/home/partimag/btzone/raw-psdo-20251229-170630/mtdblock0.torrent" "/dev/mtdblock0"
ezio seeding status output for raw-psdo-20251229-170630/mtdblock0.torrent will be in "/var/log/clonezilla/ezio-seeding.log". Use "t
ail -f /var/log/clonezilla/ezio-seeding.log" to check the status.
*****
Waiting for ezio service to be started... Done!
Feeding status:
*****
No MTA is running. Skip mailing the results of Clonezilla job to root.
PID CMD
12447 ezio
*****
Preparing files for clients to download in /var/www/html/: ocs-client-run.conf, img-wd-fs.tar.xz
Packing the tarball containing no file system images: img-wd-fs.tar.xz...
Files /var/www/html/img-wd-fs.tar.xz and /var/www/html/ocs-client-run.conf created successfully:
-rw-r--r-- 1 root root 47348 Dec 29 17:13 /var/www/html/img-wd-fs.tar.xz
-rw-r--r-- 1 root root 239 Dec 29 17:13 /var/www/html/ocs-client-run.conf
*****
The status received by ocsgrd will be saved to /var/log/clonezilla/ocsgrd-notify.log.
nohup: ignoring input and appending output to 'nohup.out'
Client jobs are recorded in this file: "/var/log/clonezilla/clonezilla-jobs.log",
*****
PS: Next time, you can run this command directly:
ocs-live-feed-img -cbn local-boot-media -dn no-dhcpd -lscm massive-deployment -mdst from-device -cdt disk-2-ndisks -bsdf sfsc -g au
to -e1 auto -e2 -x -j2 -edio -rmtb -rmcb -k0 -p true -ad bittorrent start "nvme0n1" nvme0n1
This command has also been saved to the following file for later use: /tmp/ocs-live-feed-img-2025-12-29-17-13
*****
Now, boot the clients with the same version of Clonezilla live, then run "sudo ocs-live-get-img", follow the wizard to configure the
ir network, and assign the server as: 192.168.0.100
If you want to boot Clonezilla live in unattended mode, you can assign these options as boot parameters.: locales=en_US.UTF-8 keyboa
rd-layouts=us ocs_live_run="ocs-live-get-img 192.168.0.100"
*****
Now waiting for clients to connect...
Have all clients finished their restoration jobs? //NOTE// DO NOT ANSWER "y" IF ALL CLIENTS HAVE _NOT_ FINISHED THEIR JOBS. It might
terminate services required for restoration.
[y/N]
```

[0] 0:sudo* 1:bash.

"debian" 00:43 30-Dec-25

```
EZIO v2.0.21
Press [h] for help | [q] Quit | Arrow/PgUp/PgDn: Scroll
Sort: Path ▲ | Filter: All | Verbose: OFF
*****
75 %
D: 3.19GB/min, 54.51MB/s | U: 0.00GB/min, 0.00MB/s | ETA: 0:01:36
/dev/mtdblock0: 0b10fb724fb1ca0e36a53470cca07ca91a2cd17
8.00MB / 8.00MB
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: 5][P: 0][T: 0:01:41][L: -00:00:00]
[PD: 0.00MB] / [PU: 0.00B] [FT: 0:01:36]
/dev/nvme0n1p1: 87998cc2e7583fda69070b0829960018260f4a2
256.00KB / 256.00KB
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: 5][P: 0][T: 0:01:41][L: -00:00:00]
[PD: 256.00KB] / [PU: 0.00B] [FT: 0:01:46]
/dev/nvme0n1p2: 831457f5eb77466e2cc47304f7bc25dd609a524e
64.00KB / 64.00KB
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: 5][P: 0][T: 0:01:39][L: -00:00:00]
[PD: 64.00KB] / [PU: 0.00B] [FT: 0:01:38]
/dev/nvme0n1p3: 6711b8a1cd5192a9ed8f3ffc95e44a3a6e5c81b5
1.00MB / 1.00MB
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: 5][P: 0][T: 0:01:38][L: -00:00:00]
[PD: 1.00MB] / [PU: 0.00B] [FT: 0:01:37]
/dev/nvme0n1p4: f9e99a8845617412d3b637413ea0b3e05c8c5fe
2.00MB / 2.00MB
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: 5][P: 0][T: 0:01:36][L: -00:00:00]
[PD: 2.00MB] / [PU: 0.00B] [FT: 0:01:35]
/dev/nvme0n1p5: 86aa409a187d2ff16d6d5d31dfdc08121f4ce142
108.44MB / 108.44MB
100 %
D: 0.00GB/min, 0.00MB/s | U: 0.00GB/min, 0.00MB/s
[S: 5][P: 0][T: 0:01:35][L: -00:00:00]
[PD: 108.44MB] / [PU: 0.00B] [FT: 0:01:32]
/dev/nvme0n1p6: e3bc9990681297ce930b9a3b34109b5dea093700
15.66GB / 20.86GB
75 %
D: 3.19GB/min, 54.51MB/s | U: 0.00GB/min, 0.00MB/s
[S: 0][P: 1][T: 0:04:37][L: -00:00:00]
[PD: 15.66GB] / [PU: 0.00B] [FT: 0:00:00]
```

[0] 0:bash* 1:bash.

"debian" 16:43 29-Dec-25



Screenshots :

B.1 (MCast from Image, @server)

```
Running: start_ocs_service -n 1 -f -t "multicast_restoredisk" -o "2026-01-07-07-img nvme0n1"
Waiting for udp-sender service to be started... 59 Done!
Feeding status:
*****
PID CMD
21603 udp-sender --full-duplex --min-clients 1 --max-wait 300 --interface eth0 --nokbd --mcast-all-addr 224.0.0.1 --portbase 2232 --ttl 1
21604 cat /home/partimag/2026-01-07-07-img/nvme0n1p1.dd-ptcl-img.zst
*****
More udp-sender and cat commands (if available) will be spawned when the 1st one is done.
*****
Preparing files for clients to download in /var/www/html/: ocs-client-run.conf, img-wo-fs.tar.xz
Packing the tarball containing no file system images: img-wo-fs.tar.xz...
Files /var/www/html/img-wo-fs.tar.xz and /var/www/html/ocs-client-run.conf created successfully:
-rw-r--r-- 1 root root 8996 Jan  7 16:44 /var/www/html/img-wo-fs.tar.xz
-rw-r--r-- 1 root root 257 Jan  7 16:44 /var/www/html/ocs-client-run.conf
*****
The status received by ocsmgrd will be saved to /var/log/clonezilla//ocsmgrd-notify.log.
nohup: appending output to 'nohup.out'
Client jobs are recorded in this file:: '/var/log/clonezilla/clonezilla-jobs.log',
*****
PS. Next time, you can run this command directly:
ocs-live-feed-img -cbm local-boot-media -dm no-dhcpd -lscm massive-deployment -mdst from-image -g auto -e1 auto -e2 -x -j2 -edio -rmtdd -rmmb -k0 -sc0 -p true -md multicast --clients-to-wait 1 --max-time-to-wait 300 start "2026-01-07-07-img" nvme0n1
This command has also been saved to the following file for later use:: /tmp/ocs-live-feed-img-2026-01-07-16-44
*****
Now, boot the clients with the same version of Clonezilla live, then run "sudo ocs-live-get-img", follow the wizard to configure their network, and assign the server as:: 192.168.0.108
If you want to boot Clonezilla live in unattended mode, you can assign these options as boot parameters.: locales=en_US.UTF-8 keyboard-layouts=us ocs_live_run="ocs-live-get-img 192.168.0.108"
*****
Now waiting for clients to connect...
Have all clients finished their restoration jobs? //NOTE// DO NOT ANSWER "y" IF ALL CLIENTS HAVE _NOT_ FINISHED THEIR JOBS. It might terminate services required for restoration.
[y/N]
```



Screenshots :

B.2 (MCast from Device , @server/client)

@server

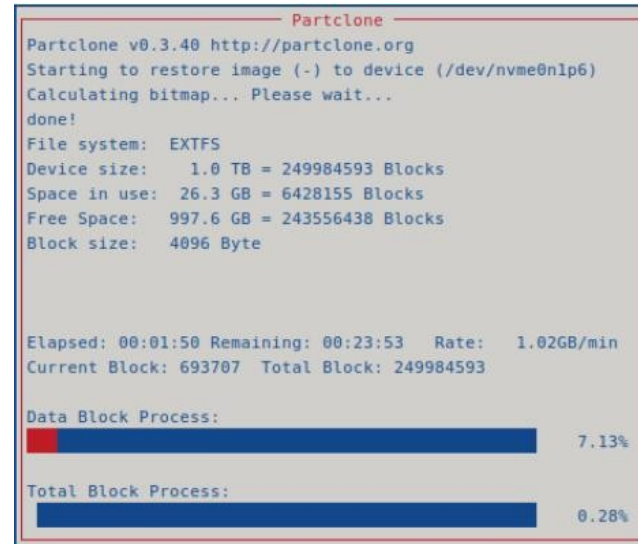
```
Action is start
*****
client boot mode is local-boot-media
The network is already configured. Available IP addresses on this machine:: 192.168.0.108
Finding all disks and partitions..
Excluding busy harddisk....
Excluding linux raid member partition....
Disk number: 1
Preparing the dialog menu info.... done!
Running: ocs-sr -sfsc -sfs -nogui -q2 --batch -j2 -scs -senc -smdt -smmb -p true savedisk "raw-psdo-20260107-205905" n
vme0n1
Setting the TERM as tmux-256color
Starting /usr/sbin/ocs-sr at 2026-01-07 20:59:06 CST...
*****
Clonezilla image dir: /home/partimag
*****
Shutting down the Logical Volume Manager
Finished Shutting down the Logical Volume Manager
The image name is: raw-psdo-20260107-205905
Selected device [nvme0n1] found!
The selected devices: nvme0n1
*****
Activating the partition info in /proc... done!
Selected device [nvme0n1] found!
The selected devices: nvme0n1
Searching for data/swap/extended partition(s)...
Finding all disks and partitions..
Excluding busy partition....
Excluding linux raid member partition.....
Unmounted partitions (including extended or swap): nvme0n1p1 nvme0n1p2 nvme0n1p3 nvme0n1p4 nvme0n1p5 nvme0n1p6
Collecting info..... done!
The data partition to be saved: nvme0n1p1 nvme0n1p2 nvme0n1p3 nvme0n1p4 nvme0n1p5 nvme0n1p6
Activating the partition info in /proc... done!
Searching MTD block (/dev/mtdblock*) and eMMC boot (/dev/mmcblk*boot*) devices... done!
Selected device [nvme0n1p1] found!
Selected device [nvme0n1p2] found!
Selected device [nvme0n1p3] found!
Selected device [nvme0n1p4] found!
Selected device [nvme0n1p5] found!
Selected device [nvme0n1p6] found!
Selected device [mtdblock0] found!
The selected devices: nvme0n1p1 nvme0n1p2 nvme0n1p3 nvme0n1p4 nvme0n1p5 nvme0n1p6 mtdblock0

PS. Next time, you can run this command directly:
ocs-live-feed-img -cbs local-boot-media -dm no-dhcpd -lscm massive-deployment -mdst from-device -cdt disk-2-mdisks -bsdf
sfsc -g auto -e1 auto -e2 -x -j2 -edio -rmtd -rmmb -k0 -p true -md multicast --clients-to-wait 1 --max-time-to-wait 300
start "nvme0n1" nvme0n1
This command has also been saved to the following file for later use:: /tmp/ocs-live-feed-img-2026-01-07-21-00
*****
Now, boot the clients with the same version of Clonezilla live, then run "sudo ocs-live-get-img", follow the wizard to co
nfigure their network, and assign the server as:: 192.168.0.108
If you want to boot Clonezilla live in unattended mode, you can assign these options as boot parameters.: locales=en_US.U
TF-8 keyboard-layouts=us ocs_live_run="ocs-live-get-img 192.168.0.108"
*****
Now waiting for clients to connect...
Have all clients finished their restoration jobs? //NOTE// DO NOT ANSWER "y" IF ALL CLIENTS HAVE _NOT_ FINISHED THEIR JOB
$. It might terminate services required for restoration.
[y/N]
```

@client

RUN : **sudo ocs-live-get-img 192.168.0.108**

```
ocs-sr -os 192.168.0.108 --ocsroot /tmp/ -l en_US.UTF-8 --batch -g auto -e1 auto -e2 --clone-hidden-data -edio -rmtd -rmmb -k0 -
p true -scr --mcast-port 2232 multicast_restoredisk "raw-psdo-20260107-205905" nvme0n1
Setting the TERM as tmux-256color
Starting /usr/sbin/ocs-sr at 2026-01-07 21:01:35 CST...
```



Results

Type	Scenario	Deployment Time (secs) at the client
A.1	BT/image	703
A.2	BT/device	658
B.1	MCast/image	728
B.2	MCast/device	939



Questions ?

Great!



?????

