

SSD CLONING

Clonezilla SSD Cloning Using Ventoy

This procedure explains how to create a Ventoy USB, add Clonezilla, boot a PC from the USB, and clone one complete SSD directly to another SSD.

Use this procedure for: direct disk-to-disk cloning of a complete system SSD, including the operating system, boot partitions, applications, and data.

Required items: one USB flash drive, the source SSD, and the target SSD.

Important Safety Instructions

Read Before Starting

- The **target SSD will be overwritten**. All data currently on the target SSD will be lost.
- Carefully identify the **source disk** and **target disk** by model, capacity, and serial number.
- The source disk is the SSD containing the working system that must be copied.
- The target disk is the SSD that will receive the clone.
- Never select the source SSD as the target.
- If possible, disconnect any unnecessary internal or external storage drives before cloning.
- Do not power off the PC or disconnect either SSD while cloning is in progress.

Part 1: Download Ventoy

1. Open the Ventoy Website

On a working Windows PC, open the official Ventoy website:

<https://www.ventoy.net/en/download.html>

Download the latest Windows Ventoy package.

The downloaded file will normally have a name similar to:

ventoy-x.x.xx-windows.zip

2. Extract Ventoy

1. Open the Downloads folder.
2. Right-click the Ventoy ZIP file.
3. Select **Extract All**.
4. Open the extracted Ventoy folder.

Part 2: Create the Ventoy USB

3. Connect the USB Flash Drive

Insert the USB flash drive that will be used as the bootable service USB.

Installing Ventoy can erase the selected USB drive. Make sure the correct USB device is selected.

4. Run Ventoy2Disk

Inside the extracted Ventoy folder, run:

Ventoy2Disk.exe

If Windows asks for administrator permission, select **Yes**.

5. Install Ventoy to the USB

1. In the **Device** list, select the correct USB flash drive.
2. Confirm the USB capacity and device carefully.
3. Click **Install**.
4. Accept the warning messages.
5. Wait until Ventoy reports that installation completed successfully.

Part 3: Download Clonezilla

6. Open the Clonezilla Download Page

Open the official Clonezilla stable download page:

<https://clonezilla.org/downloads/download.php?branch=stable>

7. Download the Clonezilla ISO

Select:

CPU Architecture: amd64

File Type: iso

Download the Clonezilla Live ISO file.

The filename will be similar to:

clonezilla-live-x.x.x-xx-amd64.iso

Part 4: Add Clonezilla to Ventoy

8. Copy the Clonezilla ISO to the Ventoy USB

1. Open **File Explorer**.
2. Open the main Ventoy USB partition.
3. Copy the downloaded Clonezilla .iso file directly onto the Ventoy USB.

The ISO does not need to be extracted.

Example:

```
Ventoy USB
└─ clonezilla-live-x.x.x-xx-amd64.iso
```

9. Safely Remove the USB

After the ISO finishes copying, safely eject the Ventoy USB from Windows.

Part 5: Prepare the PC for Cloning

10. Connect the Source and Target SSDs

1. Power the PC **OFF**.
2. Make sure the working SSD is connected. This is the **source SSD**.
3. Connect the SSD that will receive the clone. This is the **target SSD**.
4. Insert the Ventoy USB.
5. Power the PC on.

11. Open the Boot Menu

Immediately press the motherboard boot-menu key (F12) repeatedly.

Select the Ventoy USB from the boot-device list.

On many Gigabyte motherboards, the boot-menu key is **F12**.

Part 6: Boot Clonezilla from Ventoy

12. Select Clonezilla in Ventoy

When the Ventoy menu appears:

1. Highlight the Clonezilla ISO.
2. Press **Enter**.
3. If Ventoy displays a boot-mode menu, select **Boot in normal mode**.

13. Start Clonezilla Live

At the Clonezilla boot menu, select the default Clonezilla Live option and press **Enter**.

Wait for Clonezilla to load.

14. Choose Language and Keyboard

1. Select the required language.

2. Select:

Keep default keyboard layout

3. Select:

Start Clonezilla

Part 7: Start Direct SSD-to-SSD Cloning

15. Select Device-to-Device Mode

Select:

device-device

This mode clones directly from one disk to another disk.

16. Select Beginner Mode

Select:

Beginner

Beginner mode uses the standard Clonezilla cloning options.

17. Select Disk-to-Local-Disk

Select:

disk_to_local_disk

This option clones one complete local disk directly to another local disk.

Part 8: Select the Source and Target SSD

18. Select the Source SSD

Clonezilla will display the connected disks.

Select the SSD containing the working system that must be copied.

This is the **source disk**.

Identify it using:

- Disk model
- Disk capacity
- Device name
- Serial information when displayed

Device names may look similar to:

nvme0n1

nvme1n1

sda
sdb

Do not guess based only on nvme0n1, nvme1n1, sda, or sdb. Device names can change depending on the hardware and connection order.

19. Select the Target SSD

Select the SSD that will receive the cloned system.

This is the **target disk**.

Everything on the selected target disk will be overwritten. Verify the model and capacity before continuing.

Part 9: Choose Clone Options

20. Choose the Disk Check Option

When Clonezilla asks whether to check or repair the source file system, use the normal default option unless there is a known file-system problem.

For a known-good production SSD, select the option to **skip checking/repairing the source file system**.

21. Choose the Final Action

When asked what Clonezilla should do after cloning is complete, select:

poweroff

This makes it clear when the cloning process has fully finished.

Part 10: Confirm and Start the Clone

22. Review the Source and Target Disks

Before confirming, read the disk summary carefully.

Confirm:

SOURCE = Working SSD

TARGET = SSD to be overwritten

If the disks are reversed, cancel the operation immediately.

23. Confirm the Clone

Clonezilla will ask for confirmation before writing to the target disk.

Type:

y

Press **Enter**.

Clonezilla may ask for confirmation again.

Type:

y

Press **Enter** again.

24. Wait for Cloning to Complete

Clonezilla will display cloning progress.

Do not:

- Power off the PC
- Disconnect the source SSD
- Disconnect the target SSD
- Remove the Ventoy USB

Wait until Clonezilla reports that the clone has completed and the PC powers off.

Part 11: Boot and Verify the Cloned SSD

25. Disconnect the Source SSD for the First Test

After the PC powers off:

1. Disconnect the original source SSD.
2. Leave only the cloned target SSD connected.
3. Remove the Ventoy USB.
4. Power the PC on.

This prevents accidentally booting from the original SSD during the first verification.

26. Verify the Cloned System

Confirm that the cloned SSD:

- Boots normally
- Reaches the Ubuntu desktop or expected application
- Contains the expected files
- Starts the required services and applications
- Has no boot or file-system errors

27. Verify the Active Boot Disk in Ubuntu

Open Terminal and run:

```
lsblk -o NAME,SIZE,MODEL,SERIAL,MOUNTPOINTS
```

Then run:

```
findmnt /
```

Confirm that the root file system / is running from the cloned SSD.

Target SSD Size Notes

Same-size SSD: This is the preferred production-cloning setup.

Larger target SSD: Clonezilla can clone to a larger target disk. The default disk-to-disk process may preserve the source partition sizes, leaving additional space unused. Advanced Clonezilla options such as `-k1` and `-r` can proportionally recreate partitions and resize supported file systems.

Smaller target SSD: Do not assume the clone will work even if the source SSD has little data. The target-disk size and source partition layout must be compatible. For standard production cloning, use a target SSD that is the same size or larger than the source SSD.

Quick Clonezilla Selection Summary

```
Ventoy
→ Clonezilla ISO
→ Boot in normal mode
→ Clonezilla Live
→ Language
→ Keep default keyboard layout
→ Start Clonezilla
→ device-device
→ Beginner
→ disk_to_local_disk
→ Select SOURCE SSD
→ Select TARGET SSD
→ Skip source file-system check for a known-good source
→ poweroff
→ Confirm with y
→ Confirm with y again
→ Wait for completion
```

Final Warning

The most important step in this procedure is identifying the source and target SSD correctly.

The **source SSD** contains the system to keep.

The **target SSD** is erased and replaced by the clone.

Always verify the disk model, capacity, and serial information before confirming the clone.