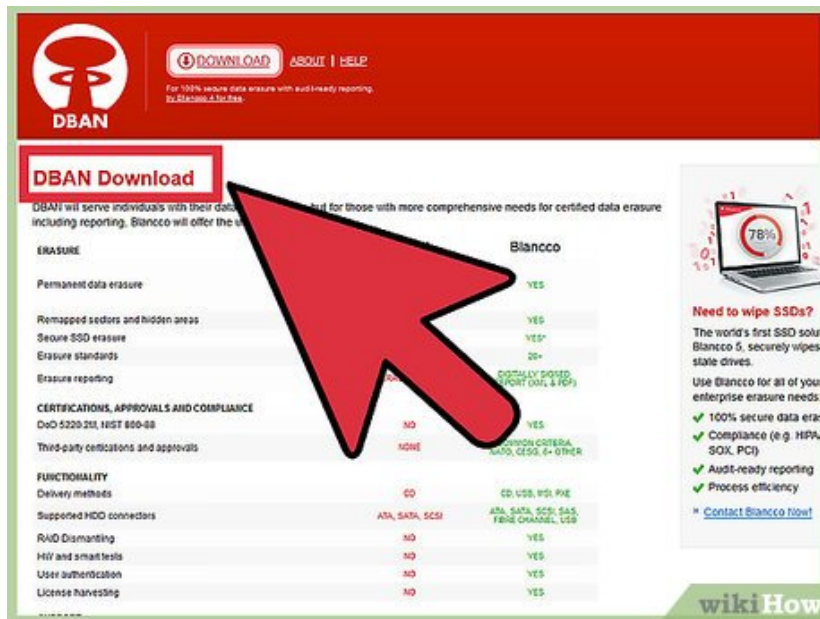


How to Permanently Erase Data Off a Hard Drive

So you want to make sure that someone can't get their hands on your private files on a hard drive. Here are ways to render your data completely unreadable. When files are deleted from a computer by emptying the Recycle Bin, Trash, or...

Method 1 of 2:

Boot and Nuke Method

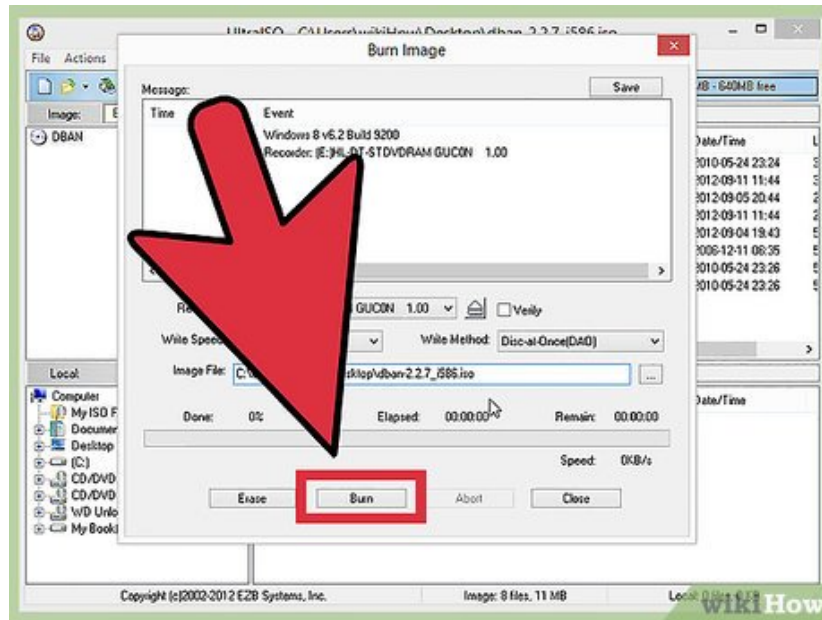


1.

Go to <http://www.dban.org/> in a web browser. This is the website to download Darik's Boot and Nuke (DBAN). Darik's Boot and Nuke is free software that supports multiple disk wiping methods. It operates from inside the computer's RAM, which allows it to thoroughly scrub the disk at a remove. This method will allow you to reuse your hard drive.^[1]

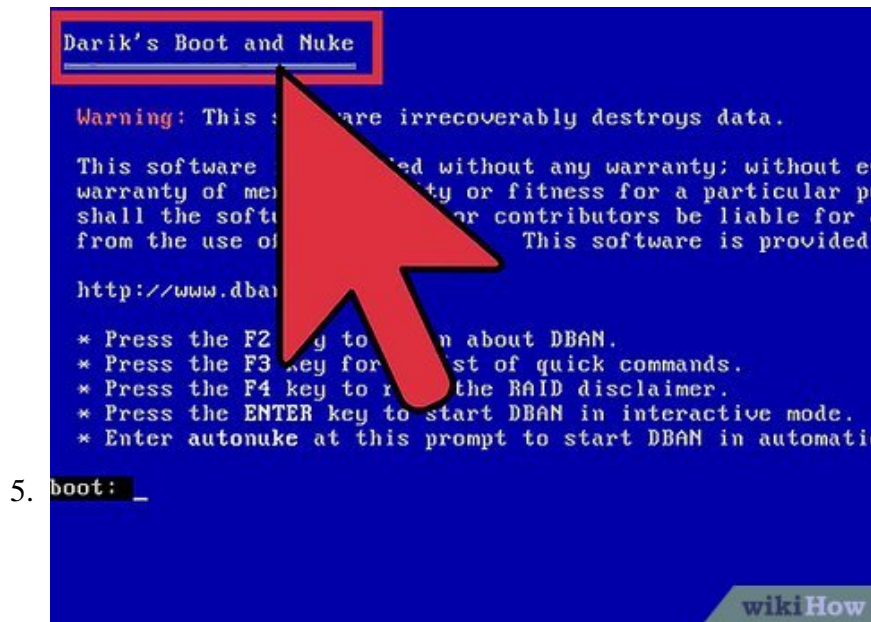
2. Click **Download**. It's in the upper-right corner of the DBAN website. This takes you to a download page for DBAN. Wait a few seconds for the download to start. DBAN is an ISO file, so there is no need to install anything. By default, downloaded files can be found in your Downloads file.
3. **Download and install Rufus (USB boot only)**. In order to use DBAN, you will need to burn the DBAN ISO file to a CD, DVD or USB thumb drive. If you plan on using a USB thumb drive, you will need a program called RUFUS to install the ISO file to the USB drive. Use the following steps to download and install RUFUS.
 1. Go to <https://rufus.ie/> in a web browser.
 2. Scroll down and click **Rufus [version number]**.
 3. Open the Rufus ".exe" file once it finishes downloading.

4.



Burn DBAN to a CD or USB drive. Since DBAN is an ISO file (also known as *CD images*), you will need to burn the software to a CD or USB drive. If you are using Windows 7 or higher, simply insert a burnable CD/DVD into your CD/DVD-R drive and double-click the DBAN ISO file. On Mac, you can use Disk Utility to burn an ISO file to a CD or use the terminal to create a bootable USB drive, on Windows, you can use the followings to create a bootable USB drive using Rufus:^[2]

1. Insert the USB drive. Make sure it has no data you want to keep.
2. Open Rufus.
3. Use the drop-down menu below "Devices" to select the USB drive.
4. Use the drop-down menu below "Boot Selection" to select **Disk or ISO image**.
5. Click **Select** to the right of the drop-down menu.
6. Select the DBAN ISO file and click **Open**.
7. Click **Start**.
8. Click **Ok** to confirm that it will erase all data on the USB.



5. **boot:** _

Boot from the CD or USB. Insert the DBAN CD, DVD, or USB drive in the computer with a hard drive you want to erase and power it on. If it doesn't boot up from the CD or USB automatically, you will need to adjust the boot order in the BIOS. On an Apple Mac, you may need to hold down the "C" key while the computer starts up. Each computer is different so consult the user's manual or manufacturer's web page for your computer to learn how to boot from a CD, DVD or USB drive.

6. **Press ? Enter** . When your computer boots from the DBAN disk, press the Enter key to start the wipe process.
7. **Select the drive(s) you want to wipe and press Spacebar** . You can normally identify a hard drive by its name and/or the capacity of the drive. Use the arrow keys on the keyboard to highlight the drives you want to erase and press the spacebar. Hard drives slated to be wiped will say "Wipe" to the left of them. **Be careful not to select a hard drive you want to keep.** You will not be able to recover data from the hard drive once it's deleted.
 1. You can also press "M" on the keyboard to change the deletion method. More passes during deletion means it does a better job of wiping the hard drive.
8. **Press F10** . This will delete all the data on the hard drive. This process may take a while to complete. When it is finished, the computer should be safe to sell or dispose of.

Method 2 of 2:

Physical Destruction Method

1. **Power down and unplug the computer.** Before tampering with your computer, it is important to make sure the computer is powered down and unplugged.
2. **Open the computer.** Each computer is different. Consult your user's manual or manufacturer's web page to learn how to open your computer to access the hard drive.
 1. For desktop PCs, you can generally remove the side panel of the computer tower.
 2. For laptop computers, you can generally remove the bottom of the computer below the keyboard.

3.



Disconnect the cables connected to the hard drive. In some cases, a hard drive may have a ribbon cable, and a power cable attached to the motherboard. In other cases, the hard drive may be directly attached to a port on the motherboard. If it has any cables attached, detach them. If the hard drive is connected to the motherboard, pry it loose from the port it's connected to.

1. If you want to salvage any of the other computer parts, be sure to touch something metal or wear static wrist bands to prevent static discharge that can damage the inside of the computer

4. **Remove the hard drive.** The hard drive is generally housed in it's own compartment. It may be held in place with screws. If so, remove the screws and then slide the hard drive out of it's compartment.

5.



Take apart the hard drive. Unscrew all the screws holding the top on. You will need the T-9 sized wrench for most hard drives. Sometimes there's an air seal. You will need to remove this.

6.



Destroy the platters. Once you get the top off you will see two or three stacked, silver disks (called platters). Put scratches on the surface of the platters with the Torx wrench. Now start smashing it with the hammer. Do this outside on a hard surface (such as concrete). Be sure to wear safety glasses to protect against flying debris. Glass platters (found on newer drives) will shatter. **If you have a large hammer (a 10 lb sledge for instance):** you can forgo opening the drive - a few good hits with a big hammer can split open the metal casing and mangle the platters, even on old full-height 5.25" drives with metal (rather than glass) platters.

1. Solid-state drives (SSDs) do not have platters on the inside. For these drives, you will need to smash the drive as much as possible.

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