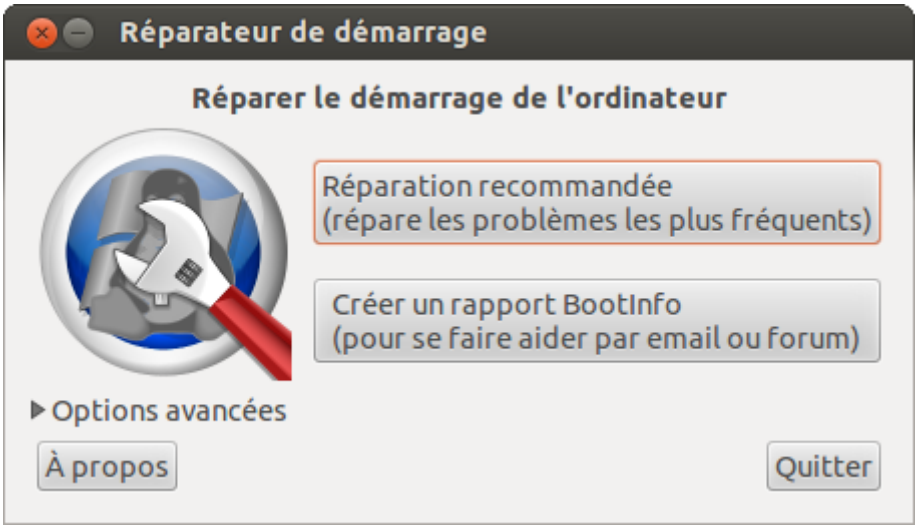
Great Focal System boot-repair

Starter Repairer

The **Startup Repair** (*Boot-Repair* in English) is a small tool that offers:

- a *Recommended Repair* button to repair most startup problems (for example when Ubuntu no longer starts after installing Windows, when the GRUB menu no longer appears [1] or when you have a *GRUB rescue>* or *out* error *-of-disk*);
- a second button to create a Boot-Info report in one click (for help via email or forum);
- advanced options allowing, among other things, to:
  - update the GRUB boot menu;
  - reconfigure GRUB (add kernel options, etc.);
  - purge and reinstall GRUB2;
  - restore an MBR allowing Windows to start in Legacy mode.
  - repairs recent PCs (UEFI) as well as old PCs.



Boot-Repair is free software (GNU () - GPL ()).

Boot-Repair repairs boot-only problems. Not the display ones for example. If you don't know what type of problem you are having, go to the diagnostic page , and create a *Boot-Info report* to ask for help on the forum.

WARNING: If your computer crashes in EMERGENCY mode saying "there is an fsck type error status 4" error, look at the physical state of your disk (https://doc.ubuntu-fr.org/smartmontools#cas_d_un_disque_interne) and do not use boot-repair.

Boot-repair does not know how to rebuild the internal Windows boot structure which must be done with the windows tools (bcdedit / rebuild)

If your computer is an ACER, it is very likely that you forgot to allow UBUNTU to boot (https://forum.ubuntu-fr.org/viewtopic.php?pid=21468818#p21468818) . Boot-repair will not do it for you.

1. Installation

Several possibilities :

1.1 Get a disk with Boot-Repair pre-installed

For convenience, or if your broken PC does not have an internet connection, you can download a disk with Boot-Repair pre-installed, for example Boot-Repair-Disk (http://forum.ubuntu-fr.org/viewtopic.php?pid=5745281#p5745281) (Live USB (https://fr.wikipedia.org/wiki/Live USB) automatically launching Boot-Repair on startup). Create a liveUSB from this ISO image, then boot your computer on it.

Warning: if your PC has Windows 8 or 10 pre-installed, and / or if it starts in EFI mode , do not burn the image on DVD , but on USB () key via any software creating EFI compatible keys.

1.2 Install Boot-Repair from a live session (DVD or liveUSB) of Ubuntu

If you have a liveDVD (or a liveUSB) from Ubuntu, and your broken PC has an internet connection, you can install Boot-Repair temporarily:

- Start the computer on the Ubuntu live CD (or the liveUSB);
- Choose *Try Ubuntu* ;
- If you haven't already, connect the internet and check that it works.

```
ping  -c5 google.com
```

- Then install the software by copying / pasting the following command in a terminal:

```
sudo add-apt-repository -y ppa:yannubuntu/boot-repair && sudo apt update && sudo apt insta
```

2. Use

2.1 Check before launching the tool

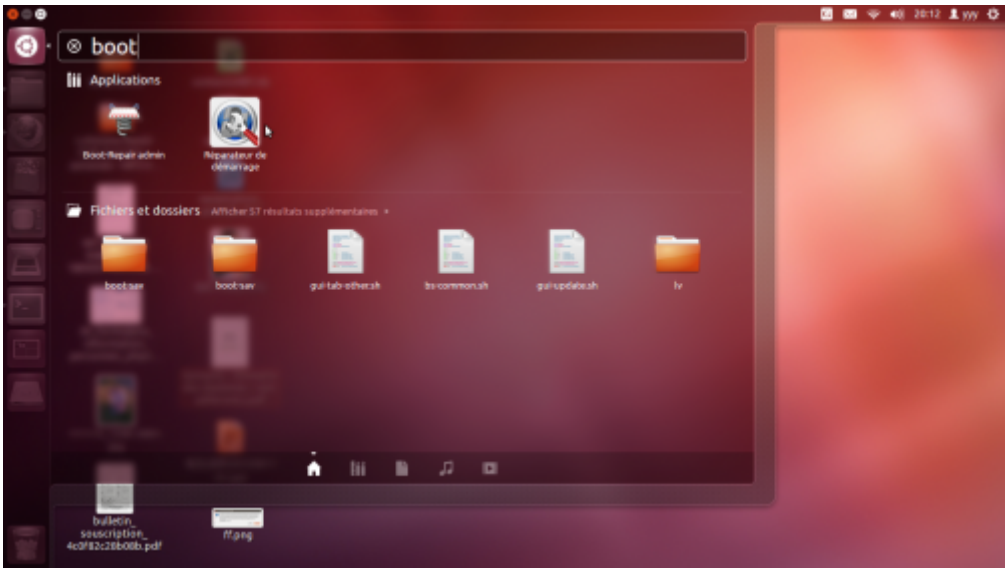
On a UEFI compatible PC , it is recommended to use Boot-Repair from a UEFI session as this allows a greater choice of repair [2)] . It is therefore recommended to:

- Check that the boot on the live-CD (or live-USB or installed session) was done in the desired mode .
- If necessary, reboot, choose the right parameter in the firmware , and recheck before proceeding.

2.2 Start-up

Run the Starter Repairer

- either via the dashboard



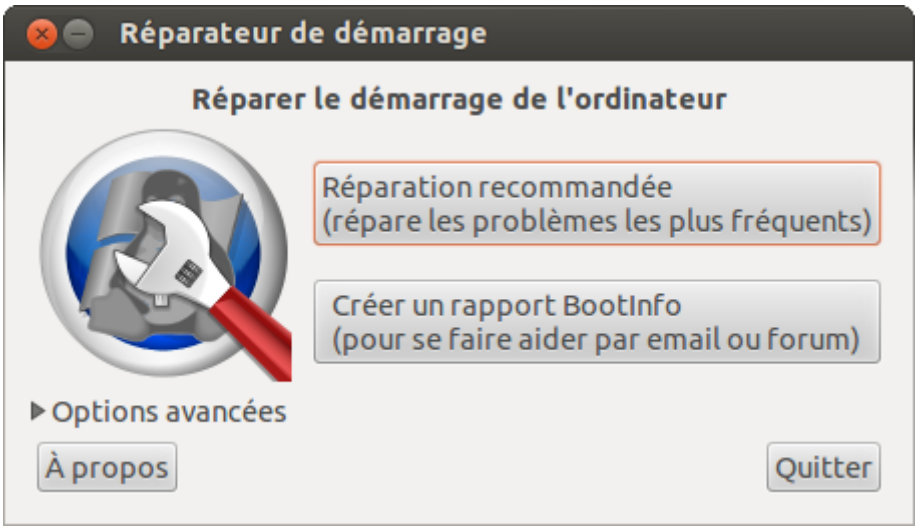
- either via the command terminal by typing *boot-repair*

2.3 Create a Boot-Info report

- click on *Create a BootInfo report* , then note the URL (address starting with "http:") that appears and indicate this URL () in a new discussion on the ubuntu-fr forum (http://forum.ubuntu-fr.org/post.php?fid=10) explaining your problem. This will allow those who are helping you to determine whether the problem you are having is boot-related, and if so whether the "Recommended repair" option of Boot-Repair is suitable or not.

2.4 Standard repair

- click on *Recommended Repair*



- once the repair is complete, restart, and check if you have access to your systems again

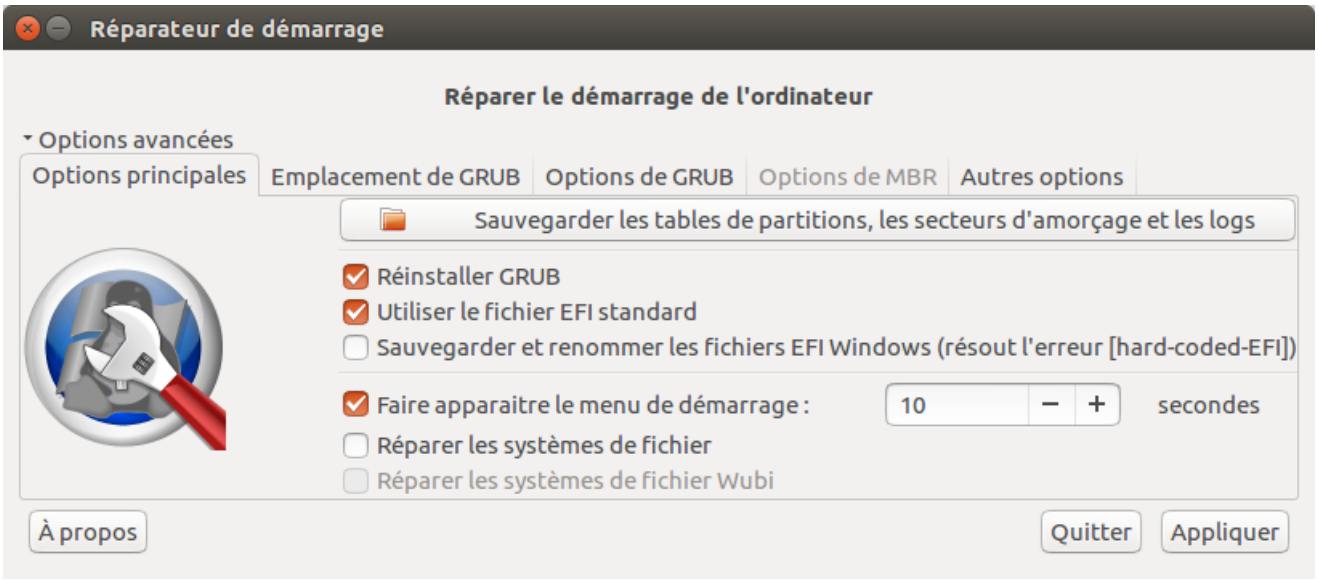
3. Advanced use

The *Advanced Options* menu offers many options: backup partition table and MBR to USB stick () , reinstall GRUB, repair file system, restore MBR, etc. divided into several tabs.

Important: The default settings are for *Recommended Repair* . **Changing them can make your problem worse.** Do not edit them without at least creating a BootInfo report and asking for feedback on this discussion (http://forum.ubuntu-fr.org/viewtopic.php?pid=4726141) .

3.1 Main options

The main options grid is displayed pre-populated with some options.



- Reinstall GRUB

This pre-populated option will reinstall a grub. Certainly the simplest action.

- Use the standard EFI file

This pre-populated option will transfer the ubuntu boot files to the official EFI boot files. A number of computers require this option.

- Back up and rename Windows EFI files

This option, to be chosen after reflection, will duplicate the ubuntu boot files in the microsoft boot files. Some computers need this option.

- Unhide boot menu

This option allows forcing the display of the GRUB menu. Some computers need this option.

- Repair File systems

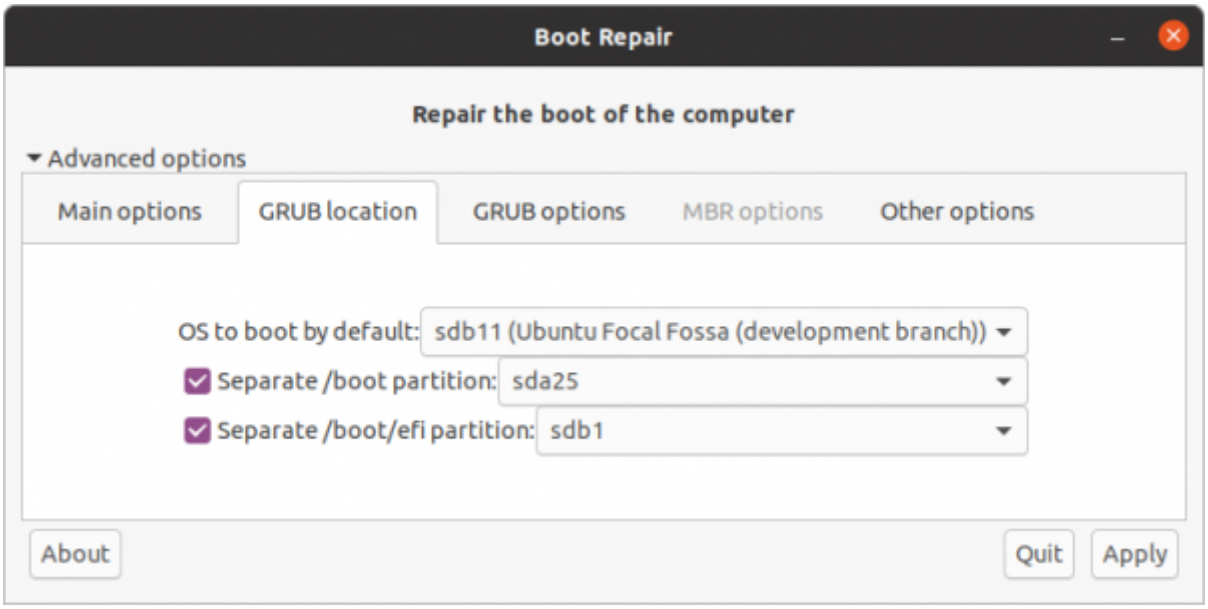
This option will examine the partitions present in the computer and restore them to their original state. Use only after creating a copy of your discs.

- Repair wubi file systems

This option allows to repair access to some wubi files.

3.2 'GRUB Location' tab

The main options grid is displayed pre-filled with certain configurable options using the drop-down menu.



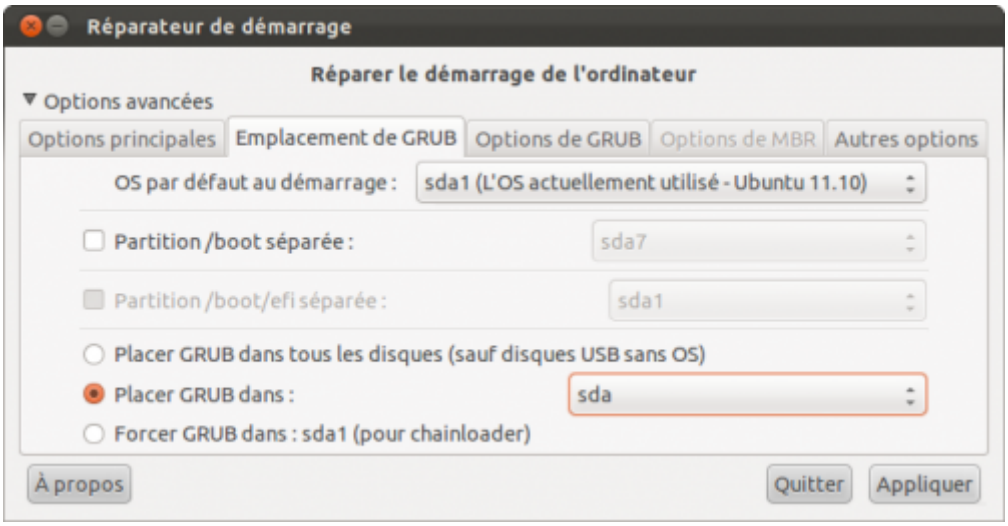
- The system to boot by default. If you select a Linux, Boot-Repair will install its GRUB. If you select Windows, Boot-Repair will install GRUB and set Windows as the default choice.
- The storage partition of the boot directory

When multiple ext4 partitions are present, boot-repair informs to check that area and choose what is best. As much as possible, having a separate boot partition should be avoided. If necessary, it is better to choose one stored on the same disk. If possible, the one that was initially planned for this OS

- The storage partition of the EFI boot directory

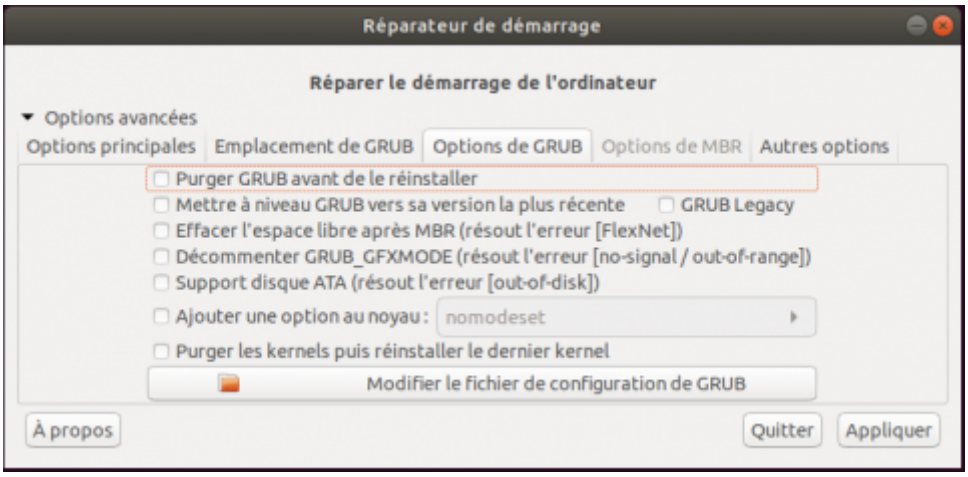
When multiple fat32 partitions or other partitions with the ESP flag are present, it is best to choose one that is stored on the same disk. Note that partitions formatted in EXT4 with the correct flag can be selected but the installation will crash.

If you did not select the / boot / efi option and you have multiple disks, you will see the following options:



3.3 'GRUB Options' tab

The options are displayed or not, selectable or not, depending on your system, and in particular the nature of the bios (EFI or LEGACY).



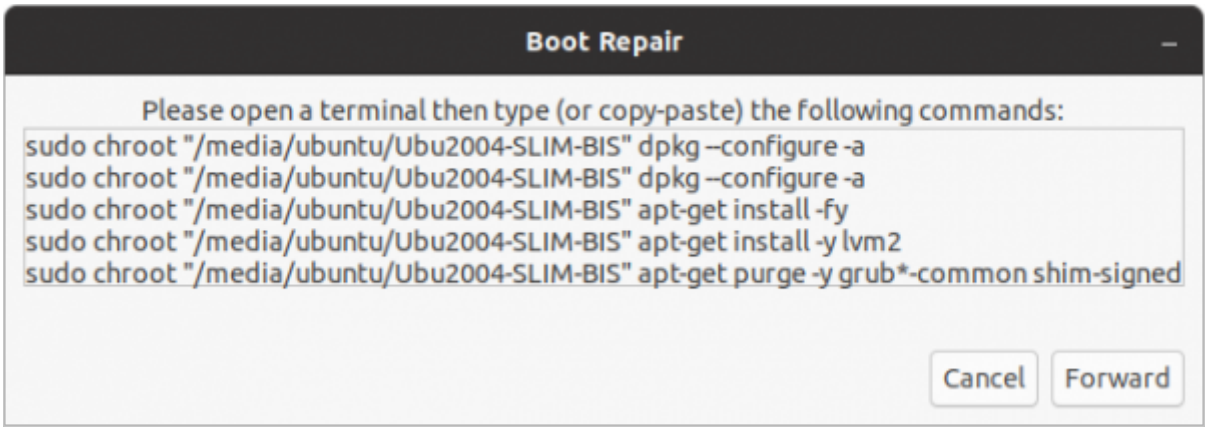
- **SecureBoot**

It is now possible not to install a secure boot. A number of computers were blocking at the time of this installation. It will certainly take a little hindsight to see the effectiveness of this novelty.

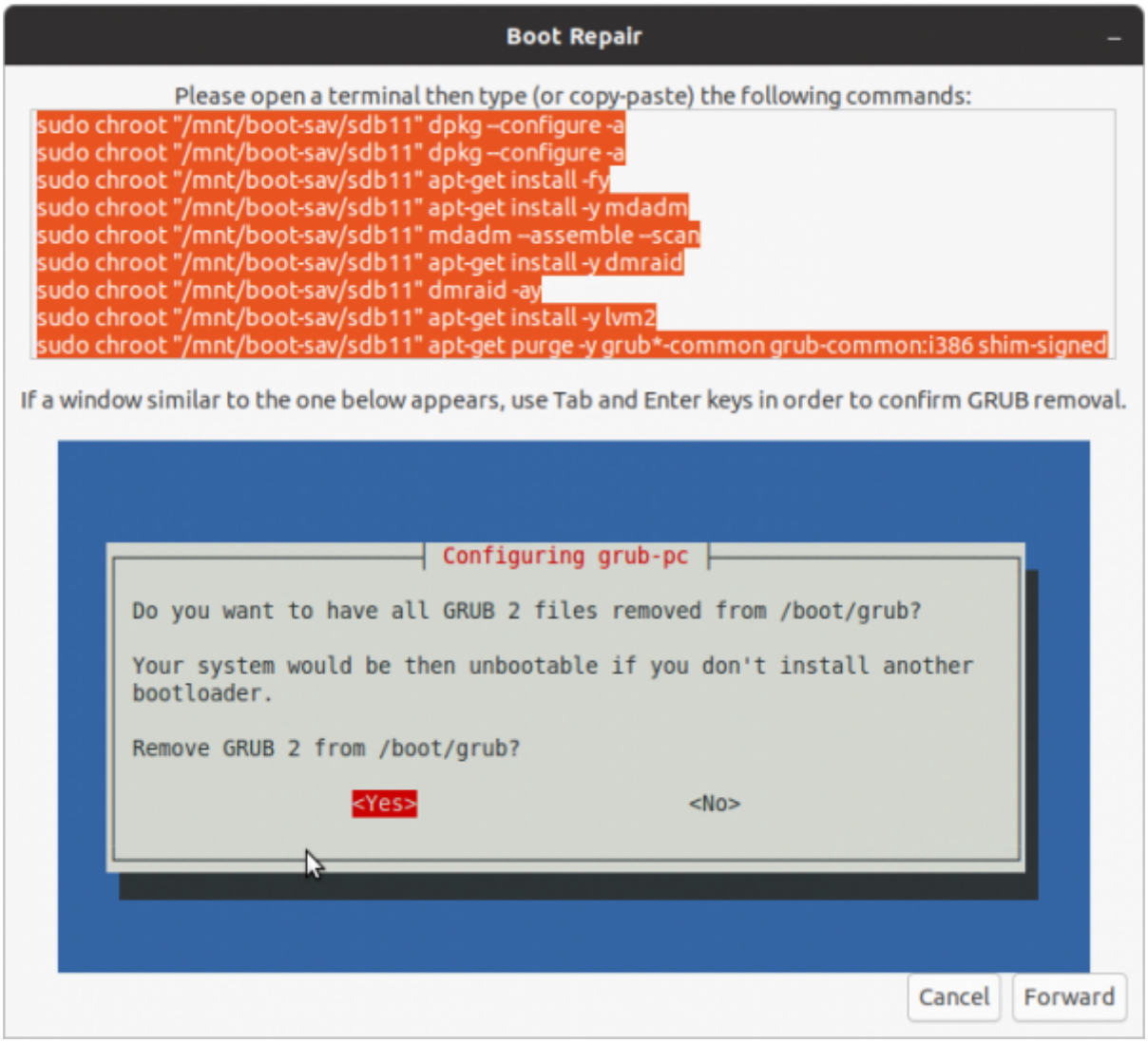
- **Purge GRUB before reinstalling it**

This option allows packages to be completely purged from GRUB, which is necessary in some cases. Causes a grid to open asking to copy some commands, open another terminal and execute them.

The grid may look like this

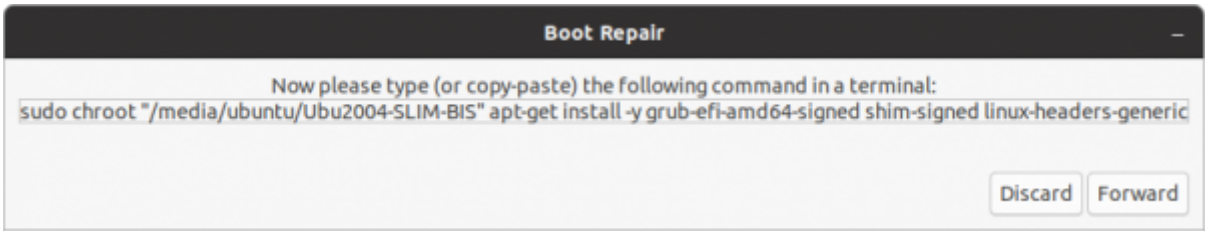


Or to that



Depending on the state of your system, some commands may generate errors. It doesn't have to be awkward at this point.

After confirming the deletion, a new grid is displayed and asks to copy an command and execute it in the already open terminal.



It is completely possible to add options (–no-nvram) to this command. It is also possible to execute additional commands. This is probably the end of repairs in chroot mode.

- **Upgrade GRUB to its most recent version**

Si sélection de cette option, un message d'avertissement apparaît. "Warning: this will install necessary packages from Ubuntu-20.10 repositories. Please backup your data before this operation.

- **Reset extra space after MBR**

This option is obviously not available in EFI mode. It is intended to eliminate 'pirate' boots which are installed in a non-standard way.

- **Uncomment GRUB_GFXMODE**

Force the display resolution of the OS boot choice file to 640x480. Required to view GRUB on some systems.

- **ATA disk support**
- **Add a kernel option**

Allows you to add predefined options in the drop-down list in the grub boot.

It is possible to add an option not provided in this list, via the button 'Modify the configuration file of GRUB' which is at the bottom of the tab.

- **Purge kernels and reinstall last kernel**

Checked by default in certain situations. Allows you to reinstall the latest ubuntu kernel by first removing all existing kernels in the selected UBUNTU. It can be used when starting the grub crashes in the processing of the initramfs file because it will be rebuilt. Risky operation, it seems preferable to deactivate it as a first step .

Use when the contents of the **/ boot** directory appear to be incorrect. Also usable if this directory no longer exists. It will then be remanufactured.

Note that this option will ask you to execute a batch of commands in a terminal to do the purification then another to install the software then it will continue on the generation of the **/boot/grub/grub.cfg** file .

Should also work if by accident all kernels were deleted.

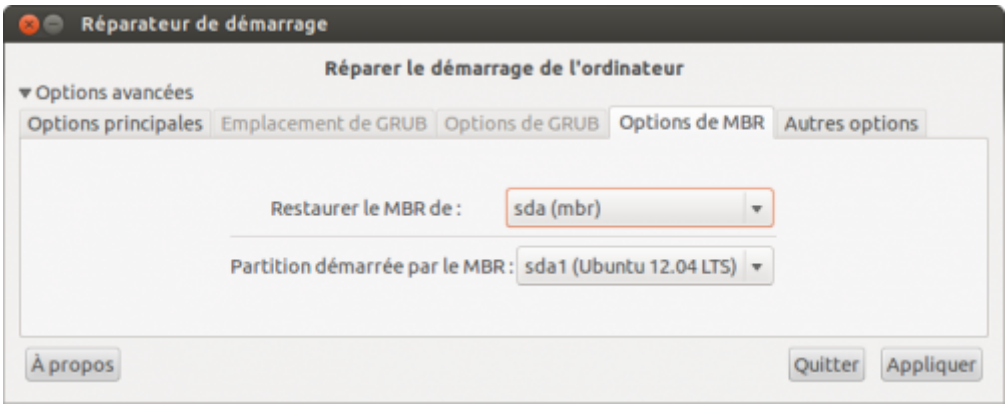
NOTE: The only options that can be added to the kernel are:

- nomodeset
- acpi=off
- acpi_osi =
- edd=on
- i815modeset = 1
- i915modeset=0
- i915modeset=0 xforcevesa
- noapic
- nodmraid
- nolapic
- nomodeset radeon mode = 0
- nomodeset radeon mode = 1
- rootdelay=90
- vga=771
- xforcevesa

3.4 'MBR options' for non EFI boot (Legacy)

This tab is inaccessible if you have checked the / boot / efi option.

Restoring a Windows MBR (to start directly on Windows) or on another system:



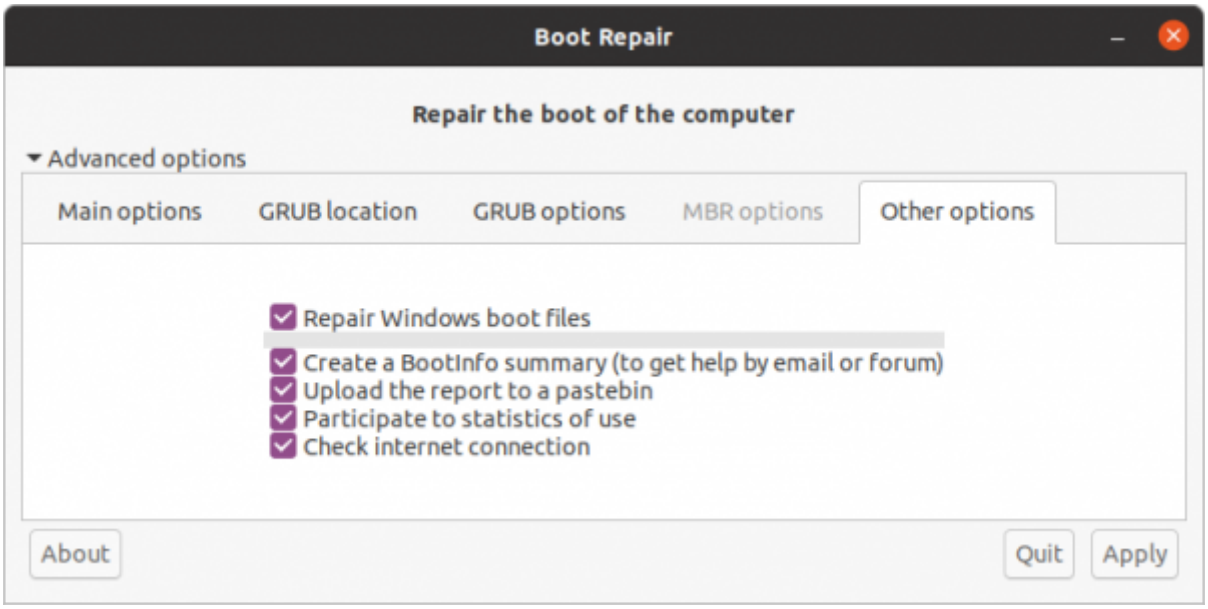
The first selection line offers all the disks present including those connected by USB () and allows you to choose the type of mbr selected:

- generic mbr: Allows you to select the boot partition by searching for the one that has a BIOS () boot flag .
- generic altmbr: Allows you to select the boot partition by imposing the partition number instead of the flag.
- generic gptmbr: Allows you to select the boot partition by searching for the one that has an ESP boot flag.

The second selection line offers all the software present in the disks including those connected by USB () and allows you to choose the one to be placed in the MBR. It is preferable to choose one present in the selected disc.

3.5 Various options

The various options grid is displayed with all the options validated. They can all be invalidated.



- Repair windows boot-files

This action is useful for some Windows systems, and has no effect on others.

- Create a boot-info summary

Create a boot-info report following the repair.

- Upload the report to a pastbin

It is also possible to copy / paste what is displayed on the screen directly in the ubuntu discussion as long as you do not forget to do the formatting.

- Participe to statistics of use
- chech internet connection

Uncheck if you have ever connected to the internet but Boot-Repair does not detect it.

4. CLI options

The complete and up-to-date list of options available on the command lines is obtained by entering the command:

```
man boot-repair
```

For example, it is possible to create a boot-info report without going through the graphical interface.

5. Uninstallation

To remove this application, just remove the **boot-repair** package . If you often use Boot-Repair on an installed session, you can delete the log / var / log / boot-repair folder in administrator mode.

6. See as well

- **(en)** Official site (https://sourceforge.net/p/boot-repair/home/fr)
- **(en)** Discussion "Boot-Repair: Repair PC startup (GRUB, MBR) in 1 click!" (http://forum.ubuntu-fr.org/viewtopic.php?pid=4726141)on the Ubuntu-fr forum: for any comments / questions, etc.
- Replacing Grub by refind with the help of Boot-Repair: remplacer_grub_par_refind
- How to install grub-efi in command lines: grub-efi

Main contributors: YannUbuntu

[1)] for example if a Windows software has written in the MBR (https://bugs.launchpad.net/bugs/441941)
[2)] if you ask Boot-Repair to repair a UEFI boot from a Legacy session, it will ask you to restart Boot-Repair from a UEFI session.