Slax on CD/DVD

If you plan to run Slax from a CD or DVD disc then you need to download Slax as an ISO file. In fact, the ISO file is a complete image of a CD, so what you need to do is to burn it to a CD/DVD media. Actually it doesn't matter if you choose CD or DVD, both will just work. The most important part is that you can't burn it as a regular file. That wouldn't work. Instead, you have to burn it as a disc image. In Windows 7 for example, just right-click the ISO file and select `Burn disc image` from the context menu. On older windowses, you'll need some special software for the task, for example you can try Free ISO Burner. When done, put Slax CD/DVD disc to your CD/DVD drive and reboot. You may need to press some key to show a boot menu while your computer starts and select to boot from CD/DVD. That magic key which shows you the boot menu is usually `F11`, `F9` or `Esc`, consult your BIOS documentation or watch onscreen instructions when your computer reboots to make sure.

Install Slax on hard disk or USB flash drive

In order to run Slax from hard drive or from an USB device, you need to copy the contents of the ISO file directly to your disk's root. There is just one folder called `/slax/`, which needs to be copied. For example Windows 8.1 will simply open the ISO file for you as like if it was a directory. You may need some special software for this task if your operating system can't access the contents of the ISO file. Alternatively, you can burn the ISO file to a CD/DVD disc and then copy it from there. You should end up with `/slax/` folder on your disk, for example like `E:\slax\`. It is required that your disk uses msdos partition scheme (use MBR, not GPT). Furthermore, it needs to be formatted, FAT32 is recommended for best portability.

When done, one more step is required in order to make the drive bootable: navigate to `/slax/boot/` directory on your USB device or hard disk and locate `bootinst.bat` file there (Linux users look for `bootinst.sh`). Just run it by double clicking, it will make all the necessary changes to your device's master boot record so your computer's BIOS could actually understand how to boot Slax from your disk. Keep in mind that the boot installer does not support multiboot, so only Slax will be bootable from the given drive.

Next follow the same procedure like if you were booting from CD - reboot your computer and choose to boot from the USB drive or hard disk in your computer's boot menu. Again, you may need to consult your BIOS documentation to find out how to boot an operating system on your computer from your desired device.

Slax boot options

Before Slax itself starts loading, you can see a big clover image in the middle of your screen. This is the boot logo. It is displayed for a short while, and you have exactly four seconds to press `Esc` key during that time in order to fine tune the way how Slax is going to boot. Pressing `Esc` will invoke a simple boot menu like the following:

```
            Run Slax (Keep changes persistent)
            Run Slax (Fresh start)
            Run Slax (Copy to RAM)
```

You may use this menu to copy Slax data to RAM during startup or to run Slax in "fresh start" mode, in case if your persistent changes are broken. Use arrow keys to navigate and `Enter` key to select any option.

Persistent changes

When running from a read-only media such as CD/DVD, Slax stores all system changes in memory only and you lose them when you reboot. If you start Slax from a writable media, such as USB drive, then all the changes you make to the operating system itself are saved and restored next time you boot. If your device uses FAT filesystem, which is most common on USB flash drives, then all file modifications to Slax itself are saved into a special file `changes.dat`, which is created on your boot device in `/slax/changes/` directory, and grows automatically in size up to 4GB. If your boot device uses a native Linux filesystem such as ext4, then the changed files are saved

natively to `/slax/changes/` directory without any need for intermediate changes.dat file. If you, for any reason, do not like persistent changes, simply select a different option in the boot menu and your Slax will start using the default 'fresh' configuration and won't save any modifications. It may be useful also in cases you'd like to test something system-wide, since you can always revert to the default state by simple reboot (in case things screw up).

The file `changes.dat` is designed to work even on FAT filesystems, which are commonly used on most USB flash drives. Unfortunately FAT is limited to 4GB file size; for that reason, persistent changes can't grow more. In case you need to save more, please format your storage drive with some Linux filesystem such as EXT4 or BTRFS and install Slax to it. Slax will be able to save changes natively and will be limited only by the actual capacity of your device. Persistent Changes functionality does not (of course) affect files on hard drives in your computer. If you modify these files, they will always be modified regardless of your persistent changes settings.

Shutting down Slax safely

When Slax is running, it reads system data from the device it booted from. If you're using Persistent Changes then Slax even writes data to your boot device. Unplugging or ejecting it would make the operating system crash. Due to that, you can unplug the boot device only after your computer is switched off or reboots to other operating system. Similarly, if you access your computer's hard drives while running Slax, those will stay mounted and will be marked as 'in use'. Be sure to always shutdown Slax properly, either from the shutdown menu or using `poweroff` or `reboot` commands, and always wait until the system ends.

Running Slax from memory

There may be situations though when you need to unplug the boot device as soon as possible while keeping Slax running. This is indeed possible; it requires your computer to load (copy) all Slax data to RAM memory during startup, so it is accessible even after your boot device is no longer plugged in. In order to put this "Copy to RAM" feature into action, make sure to start Slax with this boot option in boot menu. The time needed to start Slax will increase, since it will need to copy the entire `/slax` directory from CD or USB to your computer's memory, but then it will run Slax from there, letting you disconnect your boot device. Your computer will need at least 512 MB of RAM to hold all Slax data while still having enough free RAM for the operating system itself. Remember that even if you run Slax from memory, you have to properly shut it down when needed in order to safely unmount your hard drives (if any).

Cheatcodes for Slax

Boot parameters (also known as cheatcodes) are used to affect the boot process of Slax. Some of them are common for all Linuxes, others are specific for Slax only. You can use them to disable desired kind of hardware detection, to start Slax from hard drive, etc. To use cheatcodes, press `Esc` key to activate boot menu during Slax startup as usual, and when you see the boot menu, press `Tab`. A command line will appear at the bottom of the screen, which you can edit or add new boot parameters at the end:

Cheatcode	Meaning	Example
from=	Load Slax data from specified directory or even from an ISO file	from=/slax7/ from=/Downloads/slax.iso from=http://domain.com/slax.iso from=/dev/sda1/dir from=ask
noload=	Disable loading of particular .sb modules specify as regular expression	noload=04-apps noload=apps|chromium noload=04|05
nosound	Mute sound on startup	nosound

Cheatcode	Meaning	Example
toram	Activate Copy to RAM feature	toram
perchsize=	Increase size of Persistent Changes	perchsize=32000 perchsize=32G
perchdir=	Specify Persistent Changes session	perchdir=resume perchdir=new perchdir=ask
text	Disable starting of X and stay in textmode console only	text
debug	Enable Slax startup debugging	debug

Separate commands by space. See manual pages `man bootparam` for more cheatcodes common for all Linuxes.

Read more

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