Quick Start Manual

for

mkusb-nox version 11

by sudodus alias nio-wiklund at launchpad

- Install/copy/flash an iso file or img file to a USB pendrive with mkusb-nox

- mkusb-nox helps you find the correct target drive and avoid the risk with dd.

- If installed, mkusb-nox is in the system PATH and can be run with

```
sudo mkusb-nox file.iso
sudo mkusb-nox file.img
sudo mkusb-nox file.img.xz
sudo mkusb-nox wipe-1
sudo mkusb-nox restore
```

Preparation

- You need two drives or mass storage devices (pendrive, flash card, HDD, SSD). The minimum sizes are 1 GB and 4 GB, but obviously the final operating system will soon need more space for your personal files as well as for additional system files (program packages),

  - a drive for the installer (minimum 1 GB for a CD size iso file, typically 4 GB USB pendrive), and

  - a drive for the target, the final installed operating system (typically an internal drive, but it could also be connected via USB, eSATA or card reader). Minimum 4 GB for Lubuntu but 8 GB or more is better, and will work with all desktop flavours of Ubuntu and many other linux operating systems.

- Find more details at the following link

  https://help.ubuntu.com/community/mkusb

Backup

- Backup all personal data before trying this method because

  - the installer drive and

  - maybe also the target drive

  will be **completely overwritten**
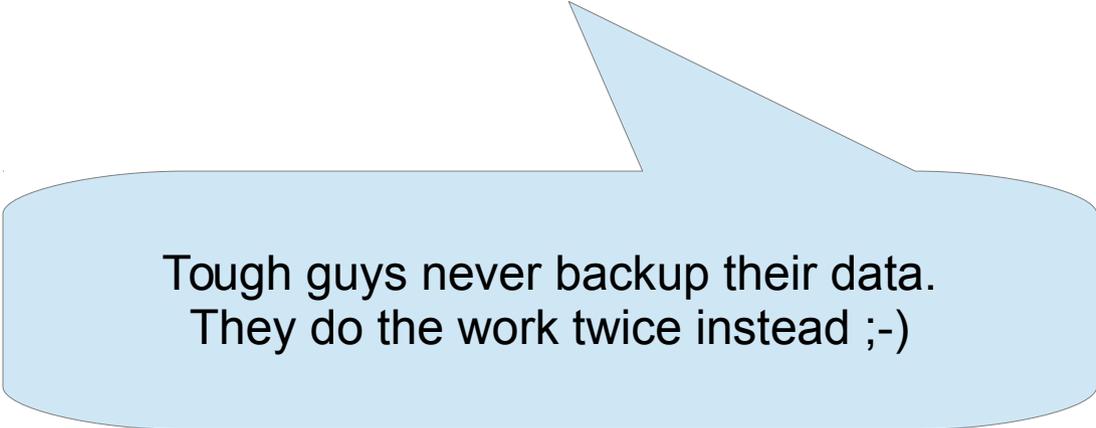
Tough guys never backup their data.
They do the work twice instead ;-)

Install mkusb-nox, download and check image files

- Install the shell-script ***mkusb-nox*** and download a hybrid iso file or compressed image file with the operating system.

- mkusb-nox can be installed in Ubuntu from PPA with the following commands

  ```
  sudo add-apt-repository ppa:mkusb/ppa  # and press Enter

  sudo apt-get update

  sudo apt-get install mkusb-nox
  ```

- or according to https://help.ubuntu.com/community/mkusb/gui#from_phillw.net with the command lines

  ```
  wget http://phillw.net/isos/linux-tools/mkusb/mkusb-installer

  bash mkusb-installer
  ```

- Check the ***md5sum*** of the iso files and compressed image files

  ```
  file.iso  file.img  file.img.gz  or  file.img.xz

  md5sum file.iso
  ```

If mkusb-nox downloaded, not installed

- Make the downloaded file executable

   $ chmod ugo+x mkusb-nox

- Run mkusb-nox locally (in the directory, where it is together with the source file (ISO or other image file)

   – You need superuser privileges, use sudo or run as root (depending on the linux distro)

   $ sudo ./mkusb-nox file.iso

   # ./mkusb-nox file.iso

Help text

```
$ ./mkusb-nox  # or (if installed) mkusb-nox
Usage:
---- Make a USB install device from ISO or image file --------------
sudo ./mkusb-nox file.iso
sudo ./mkusb-nox "quote file name (1) with special characters.iso"
sudo ./mkusb-nox file.img
sudo ./mkusb-nox file.img.gz
sudo ./mkusb-nox file.img.xz
sudo ./mkusb-nox file.tar    # if an mkusb tarfile for Windows
---- Install from 'file.img.xz', show all mass storage devices
sudo ./mkusb-nox file.img.xz all
---- Wipe the USB device (may take long time) ----------------------
sudo ./mkusb-nox wipe-whole-device
---- Wipe the first megabyte (MibiByte), show only USB devices
sudo ./mkusb-nox wipe-1
---- Wipe the first megabyte, show all mass storage devices --
sudo ./mkusb-nox wipe-1 all
---- Restore to a storage device with FAT32 file system ------------
sudo ./mkusb-nox restore
---- Help and Version ----------------------------------------------
./mkusb-nox -h
./mkusb-nox -v
```

Dialogue

```
# mkusb-nox  TinyCore-5.4.iso
The iso file SHOULD BE loop mounted on a temporary file READ-ONLY:
WARNING: All config files need .conf: /etc/modprobe.d/bluez, it will be
ignored in a future release.
mount: block device /media/multimed-2/CD/tinycore/TinyCore-5.4.iso is
write-protected, mounting read-only
disk_name_type=title
MENU TITLE TinyCore _found_ in iso-file
MENU TITLE TinyCore _not_ in USB device
Do you want to make a new one? (y/n)
y
*** WARNING: the device will be completely overwritten      ***
*** quit with (q)                                           ***
***  Unmount the device if mounted  ***************************

Name: ata-SAMSUNG_HD322HJ         Dev: /dev/sda  Size: 320GB
Name: ata-OCZ-AGILITY3            Dev: /dev/sdb  Size: 60GB
Name: ata-WDC_WD1003FBYZ-010FB0   Dev: /dev/sdc  Size: 1000GB
Name: usb-SanDisk_Cruzer_Blade    Dev: /dev/sdd  Size: 4005MB
Live drive: /dev/sdb

---> 1: install to USB: SanDisk_Cruzer_Blade Dev: /dev/sdd Size: 4005MB
Go ahead with (g) or quit with (q). Toggle USB-only with (u).
g
1: source: TinyCore-5.4.iso
   target: USB: SanDisk_Cruzer_Blade   Dev: /dev/sdd  Size: 4005MB
 Final Checkpoint
Do you really want to wipe and install to this device? (y/n)
y

Installing TinyCore-5.4.iso to /dev/sdd ...

< "TinyCore-5.4.iso" pv -s 14680064 | dd bs=4096  of=/dev/sdd
Please wait for sync (flushing file system buffers to the device)
until 'Done' is written ...
   14MB 0:00:00 [82.1MB/s]
[==========================================================>] 100%

3584+0 records in
3584+0 records out
14680064 bytes (15 MB) copied, 0.802436 s, 18.3 MB/s
Syncing the device ...
Done :-)
#
```

(Some system information may be written here)

Identifying the drives

In this case only one USB drive is available

This part is the same as in mkusb's console

pv is installed - otherwise no progress indicator. *pv* shows Mibibytes, *dd* shows Megabytes

ISO-testing

- You clone the same version and flavour of Ubuntu several times during iso testing. Then it will be very convenient after the first time.

```
$ sudo mkusb-nox mini.iso

[sudo] password for sudodus:

The iso file SHOULD BE loop mounted on a temporary file READ-ONLY:

mount: block device /media/multimed-2/test/mkmkusb/mini.iso is write-protected,

mounting read-only

disk_name_type=mini

Ubuntu 14.04. _found_ in iso-file

Ubuntu 14.04. _found_ in /dev/sdd

 Final Checkpoint

Install to /dev/sdd? (y/n)

y

pv mini.iso| dd of=/dev/sdd bs=4096 ...

   31MB 0:00:00 [ 476MB/s] [=======================================>] 100%

7936+0 records in

7936+0 records out

32505856 bytes (33 MB) copied, 1.17045 s, 27.8 MB/s

syncing the drive ...

The Ubuntu 14.04. USB device is re-cloned  :-)
```

Running as regular user (with sudo)

Automatic detection of the USB pendrive

Only one question and reply (y/n)

Wipe the first megabyte

- If you want to re-use a USB drive that has been used like this, you should wipe it with dd (overwrite with zeros), otherwise for example grub-install doesn't want to write into the mbr area, because it recognizes the CD file system, iso9660. (You need not wipe it before cloning with mkusb-nox, only if you intend to use some other tools to make partitions and file systems.)

- You can use mkusb-nox also for this task and wipe the whole drive,

  `$ mkusb-nox wipe-whole-device`

- but often it is enough to wipe the first megabyte of the drive, wipe-1

  `$ sudo mkusb-nox wipe-1`

  `# mkusb-nox wipe-1    # running as root in some distros`

- After wiping you can use *gparted* or some other tool to create a new partition table and file system(s).

Restore to a storage device

- Automatic method

  - Simplified version of mkusb's wipe menu

  - mkusb-nox can wipe the first megabyte and restore the device automatically to a standard storage device with

    - an MSDOS partition table and

    - a partition with a FAT32 file system.

- Command line

  ```
  $ sudo mkusb-nox restore
  ```

References

- A command line manual is available, when mkusb-nox is installed

  `$ man mkusb-nox`

- See the tutorials in the Ubuntu Forums for more details

  Howto make USB boot drives

  Try Ubuntu (Kubuntu, Lubuntu, Xubuntu, ...) before installing it

  Howto help USB boot drives

- alongside the following link to the mkusb wiki page and a link to where the mkusb files are uploaded

  https://help.ubuntu.com/community/mkusb

  http://phillw.net/isos/linux-tools/mkusb/

- and read this wiki page with methods and tools to create USB boot devices/drives/sticks

  https://help.ubuntu.com/community/Installation/FromUSBStick