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K0LO
A Carafe of Ubuntu

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Ubuntu on a USB Pen Drive Revisited

Kubuntu Live Desktop on a USB pen drive -- GRUB version

In my post #100 there are instructions for making a bootable USB pen drive version of the Kubuntu/Ubuntu LiveDesktop CD. If you want a more compact version, you can save some space by using GRUB as the bootloader instead of syslinux.

Also, since my original post I've found other files on the CD that are only used by Windows and can be deleted.

Here is a summary of the space requirements for the different installations:

LiveDesktop CD ---------- 695 MB -- 97 folders -- 502 files
Syslinux USB pen drive -- 638 MB -- 58 folders -- 249 files
GRUB USB pen drive ----- 627 MB -- 51 folders -- 70 files

Why bother? If you're partitioning your pen drive so that you can use the persistent feature you will want to leave as much space available as possible for the "casper-rw" partition that holds the filesystem changes. I was able to create two partions on a 1 GB USB pen drive; 643.2 MB for a filesystem partition formatted as FAT32 and 329.5 MB for the casper-rw partition formatted as ext2. If you have a larger pen drive then this is not as much of an issue.

Here's a condensed description of the process.

1. Follow the article "LiveUsbPendrivePersistent" in the Ubuntu wiki:
https://wiki.ubuntu.com/LiveUsbPendrivePersistent

2. In the section "Making Partitions" you can use smaller sizes for the two partitons. Make the first partition at least 643 MB and allocate the remaining space to the second partition.

3. In the section "Installing Dapper on the USB pendrive" modify as follows:

Copy the following folders from the CD to the 1st partition on the pendrive:
'casper', 'dists', 'install', 'pics', 'pool', 'preseed', '.disk'

Copy the following files from the CD to the 1st partition on the pendrive:
'md5sum.txt'

Do **not** copy any of the isolinux files and do **not** duplicate 'vmlinuz', 'initrd', or 'mt86plus'. GRUB can find these files in their current folders so there is no need to duplicate them in the root directory.

Do not rename isolinux.cfg since it was not copied and is not needed.

4. In the section "Making the pen drive bootable, substitute the following steps to install GRUB:

Create a /boot directory
Code:

```
sudo mkdir /boot
```

Find your device name for the USB pen drive and the mount name. My device name was /dev/sdc with two partitions; /dev/sdc1 is the primary partition and /dev/sdc2 was the casper-rw partition. My mount name was /media/sdc1 for the primary partition. These names will vary depending on the drive configuration of your PC. **Be sure that you know the correct name!** You do not want GRUB to install itself to one of your hard disks during this step. I suggest writing the command down on paper with the correct device and mount names substituted to be very certain that you will type the command correctly.

Code:

```
sudo grub-install --root-directory=/media/sdc1 --no-floppy /dev/sdc
```

This command will install GRUB to the Master Boot Record of the USB pen drive and place its files in the /boot/grub folder of the first partition. Again, be sure to substitute the correct device names!

Check the contents of the /boot/grub folder:
Code:

```
cd /media/sdc1/boot/grub
ls
```

Now you can delete some of the files from this folder if you want to save a little more space. Leave the following files:
'stage1', 'stage2', 'e2fs_stage1.5', 'fat_stage1_5'
and delete the others.

Create a menu.lst file and place it in this folder. Here is the file that I used:
Code:

```
# menu.lst - Customized for Kubuntu Live Desktop 6.06
#              MJW 8 Jul 2006

default        0
timeout        3
color white/blue yellow/blue

title          Kubuntu Live Desktop (Persistent)
root           (hd0,0)
kernel         /casper/vmlinuz boot=casper persistent ramdisk_size=1048576 root=/dev/ra
initrd         /casper/initrd.gz
boot

title          Kubuntu Live Desktop
root           (hd0,0)
kernel         /casper/vmlinuz boot=casper ramdisk_size=1048576 root=/dev/ram rw quiet
initrd         /casper/initrd.gz
boot

title          Kubuntu Live Desktop (Safe Graphics Mode, Verbose Startup)
root           (hd0,0)
kernel         /casper/vmlinuz boot=casper xforcevesa ramdisk_size=1048576 root=/dev/ra
initrd         /casper/initrd.gz
boot

title          Memory Test
root           (hd0,0)
kernel         /install/mt86plus
boot
```

Now when you boot the USB pen drive you should see the GRUB bootloader screen and you can select which version of LiveDesktop that you want to boot. The menu.lst file above can be customized with your own preferences. For example, change the colors to "white/brown yellow/brown" for Ubuntu users, change the default timeout in seconds, etc.

Last edited by K0LO; September 11th, 2006 at 12:13 PM..