

Creating and Cloning USB "live sticks"

All: This is a summary of my experimenting so far. Cloning notes are at the end. -- CM

Test Computers and USB drives used:

Test Computers

- A - Dell Inspiron 6000 laptop, Intel Pentium M 1.5 GHz, 2.0 GB RAM
- B - Pentium 4 CPU 2.66GHz, 256 mb RAM
- C - Intel Core 2 Duo CPU, E6850 @ 3.00 GHz, 3 GB RAM, NVIDIA GeForce GT 240 video card
- D - MacBook laptop [5-6 yrs old]

2 8GB and 1 4GB **USB drives**

Stick Creation Recipe (Windows)

On Windows 7 desktop - downloaded these files (32 bit) from <http://spins.fedoraproject.org/>
 liveusb-creator-3.11.6-setup [use to install Live Creator]
 Fedora-16-i686-Live-Desktop.iso
 Fedora-16-i686-Live-KDE.iso
 Fedora-16-i686-Live-Design-suite.iso
 Fedora-16-i686-Live-LXDE.iso

To create USB stick

- Must Run Live Creator as Administrator -
- point to the iso file you want

That's it!

Test Results

- created the sticks and did USB boot to bring the computer up in Fedora/Linux
- got on network
- applications worked
- see "Running Updates Test Results" and "Bootting from USB Notes" below for additional info.

Computer	iso tested	result
A	all 4	all worked
B	all 4	LXDE worked, others failed
C	all 4	all failed (saw the fedora startup screen then went blank or crazy colors on screen - thinking the NVIDIA graphics card is the problem)
*D	Desktop	failed - could not get this system to boot from USB [long story]

** Positive note - the owner of the MacBook uses Photoshop at work. I introduced him to the Design spin and GIMP. We installed GIMP on his old MacBook. He was pretty excited about that. So not a complete failure! (There is strong opinion among many working graphic artists, that free/open GIMP is better than Photoshop.)*

Running Updates

Test Results [tried running updates on two of the sticks - using computer A]

Observation - reports of problems running updates is a big topic discussion online.

I wouldn't want a newbie trying to figure this out.

Test 1 - Fedora-16-i686-Live-Desktop stick

I ran updates - Required 431 software updates - did not complete successfully

Update "broke" Firefox.

Tried: yum --enablerepo=updates-testing list firefox

This apparently installed Firefox 11 which wasn't supported by this spin version

Tried running updates again for the spin on 4/23 - kernal panic - shutdown - rebooted -

mount: /dev/mapper/liv-rw: can't read superblock

"dracit warning: can't mount root filesystem

Dropping to debug shell

"sh: can't access tty; job control turned off

dracut:/#

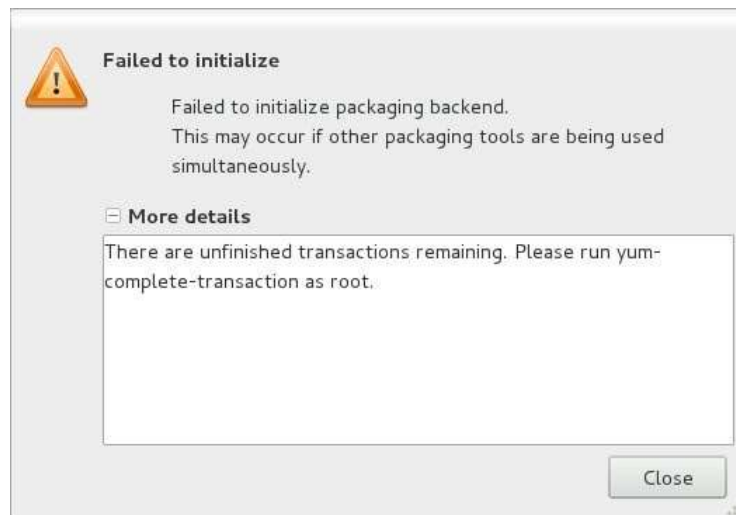
4/23 [Researched how to resolve (many postings about similar problems after running updates) - no success -

REFORMATTED usb - installed new download of Fedora-16-i686-Live-KDE.iso] *Updates lose? Wait for new releases instead?*

Test 2: Fedora-16-i686-Live-Design-suite

Ran updates did not complete

Screen shot of error



yum-complete-transaction [output below]

...

```
[root@localhost liveuser]# yum-complete-transaction
```

```
Loaded plugins: langpacks, presto, refresh-packagekit
```

```
fedora/metalink | 265 B 00:00
```

Could not parse metalink <https://mirrors.fedoraproject.org/metalink?repo=fedora-16&arch=i386> error was

No repomd file

updates/metalink | 265 B 00:00

Could not parse metalink <https://mirrors.fedoraproject.org/metalink?repo=updates-released-f16&arch=i386>

error was

No repomd file

Error importing repomd.xml from fedora: Unable to open /var/cache/yum/i386/16/fedora/repomd.xml

...

Attempted solution:

/etc/hosts - added - 80.239.156.215 mirrors.fedoraproject.org

This didn't work - same error as above when running yum-complete-transaction

Tried multiple times - got a different output once - but still an error [output below]

...

```
[root@localhost liveuser]# yum-complete-transaction
```

```
Loaded plugins: langpacks, presto, refresh-packagekit
```

```
fedora/metalink | 265 B 00:00
```

Could not parse metalink <https://mirrors.fedoraproject.org/metalink?repo=fedora-16&arch=i386> error was

No repomd file

```
updates/metalink | 7.6 kB 00:00
```

```
updates | 4.5 kB 00:00
```

```
updates/primary_db | 4.7 MB 00:13
```

```
updates/group | 1.9 MB 00:05
```

....

Since this looked like there WAS communication to the metalink, I waited a few hours and tried again. Had to run yum-complete-transaction multiple times to get all transactions to successfully complete. On my 3rd try now - still not completed (4/24 1:20pm), but it is communicating with the servers.

“Has one process with 538 elements left to complete”

Repeated this several more times – same result - “Has one process with 538 elements left to complete”

Booting from USB Notes

Computer - USB boot info

A & C - F12 took me to **boot device** menu to select USB - no problem

B - F12 didn't work, F2 got into the BIOS configuration. Had to have the USB drive in the computer and force it to be the first HD. Also had to enable USB booting.

*** Observation: a newbie would not have figured this out ***

C - under the startup controls - the USB drive was not a choice. We tried booting holding the “option” {i think} key down and got to the “pad lock” on the screen. The owner didn't remember the system admin password. We got stuck at that point and didn't have time to test other options.

Clone USB sticks - Notes

1 - `dd if=/dev/sdX of=/dev/sdY bs=4096 conv=noerror`

Where `/dev/sdX` is the USB drive with the Fedora spin installed on it and `/dev/sdY` is the formatted USB drive that you want to copy the spin onto. In the Terminal window – use “mount” or “df –a” to see the location of the USB drives.

Note that you want the device name (e.g. `/dev/sdx`) not the partition name (e.g. `/dev/sdx1`)

Much more additional info is here:

http://fedoraproject.org/wiki/How_to_create_and_use_Live_USB

2 - http://wiki.sugarlabs.org/go/Sugar_on_a_Stick/Sugar_Clon [bash script file using HAL]

BUT --- HAL isn't part of Fedora 16 - replaced by udisks [I think]

Can this script be rewritten?

If yes, someone online mentioned a bash shell script and putting an ICON on the desktop to run the cloning.

3 - TODO - try the windows cloning instructions

[4/25 –after reviewing this more, I don't think it will be helpful and did not do further testing]

<http://lists.fedoraproject.org/pipermail/users/2009-October/090721.html>

4 - more links to ideas on how to clone

* <http://linux.bigresource.com/Fedora-Clone-Partition-and-Put-it-on-Another-HDD-CJEQD1fAz.html#OOGhgIBTk>

* <http://freecode.com/projects/g4l>

G4L is a hard disk and partition imaging and cloning tool. The created images are optionally compressed, and they can be stored on a local hard drive or transferred to an anonymous FTP server. A drive can be cloned using the "Click'n'Clone" function. G4L supports file splitting if the local filesystem does not support writing files larger than 2GB. The included kernel supports ATA, serial-ATA, and SCSI drives. Common network cards are supported. It is packaged as a bootable CD image with an ncurses GUI for easy use.

?? VirtualBox -- possible solution?

* <http://www.virtualbox.org/manual/ch08.html#vboxmanage-clonevdi>

* <http://www.linuxforu.com/2011/12/fedora-scientific-open-source-scientific-computing/>

* <http://clonezilla.org/>