How to boot Zybo with SD Card

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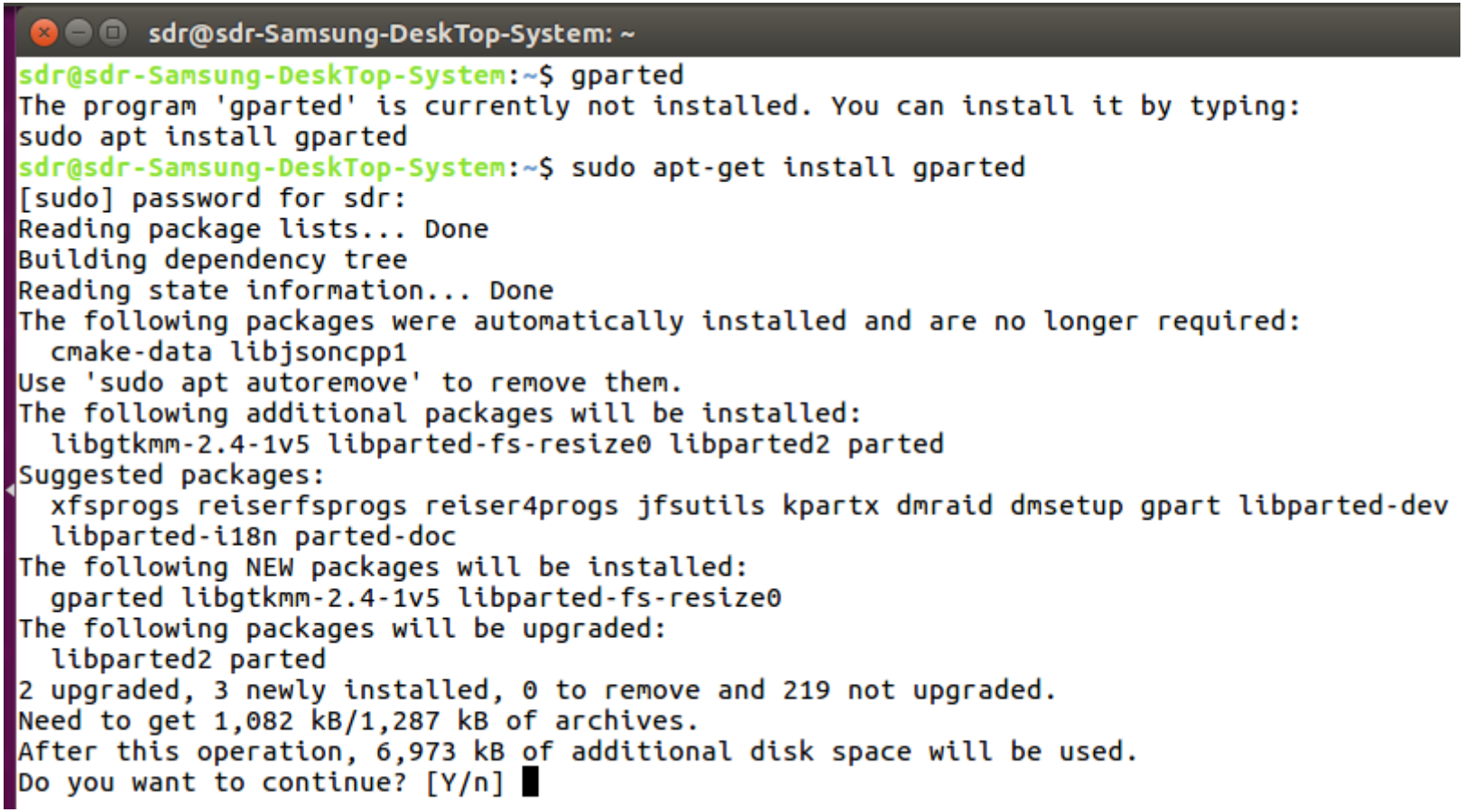
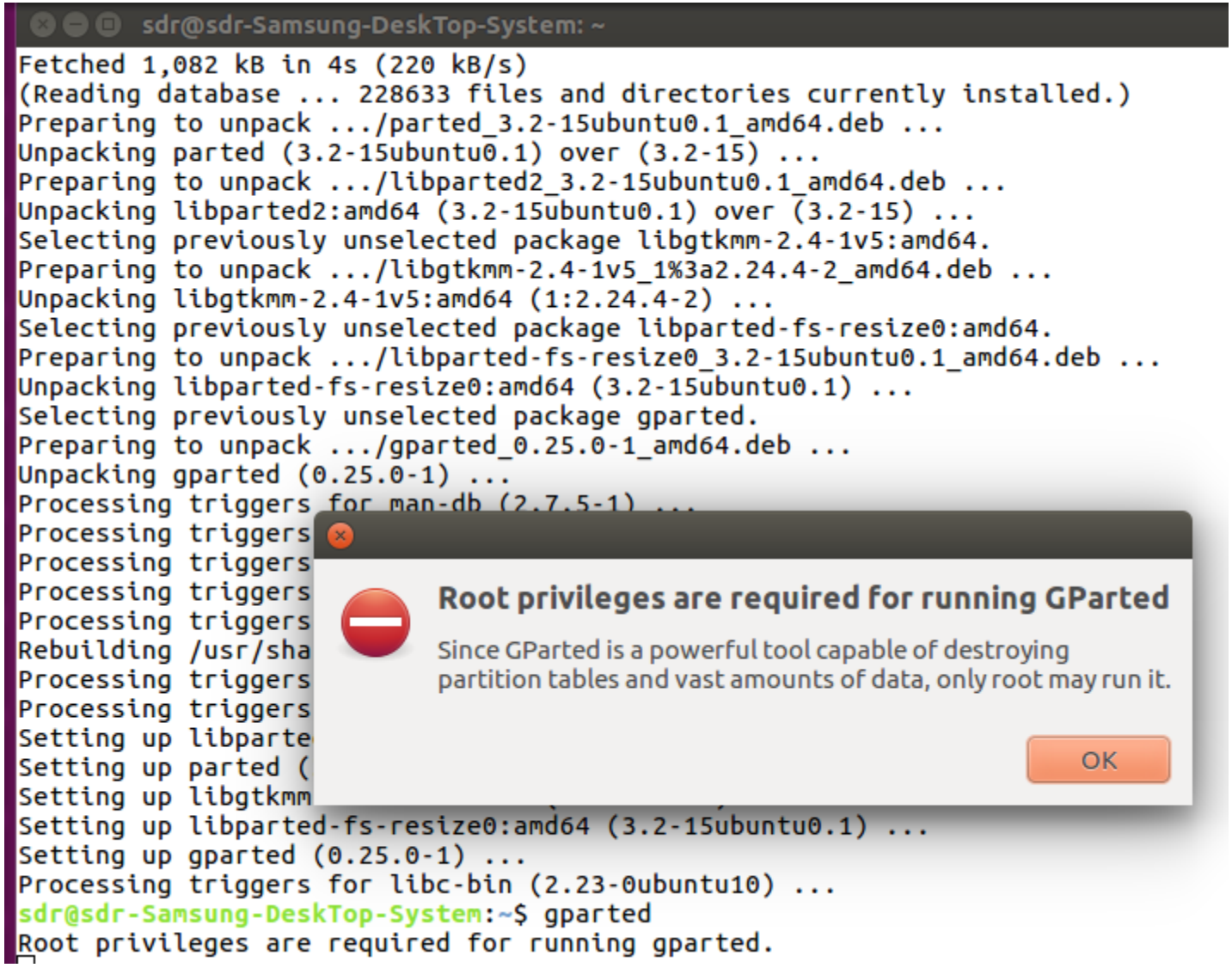
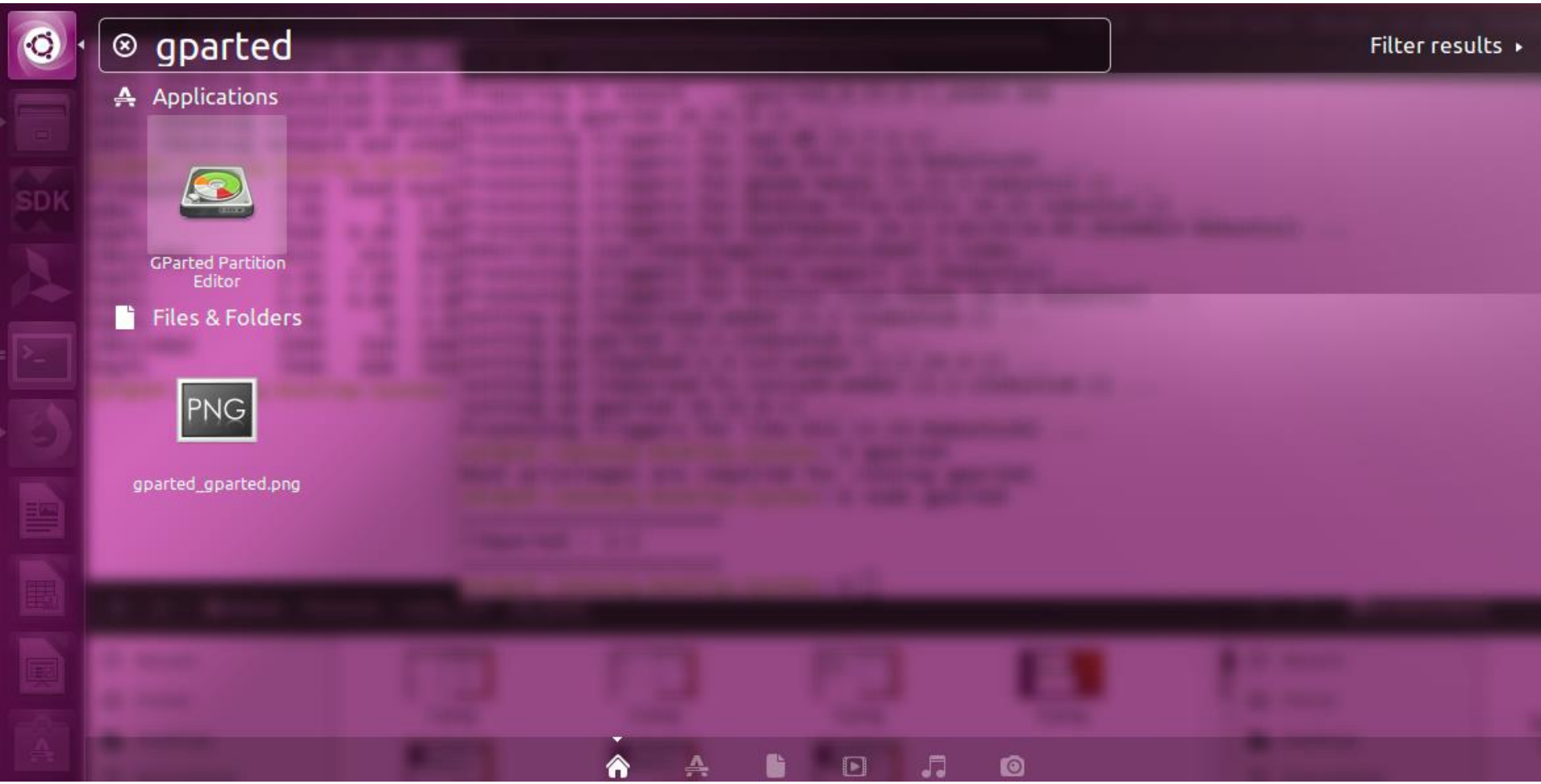
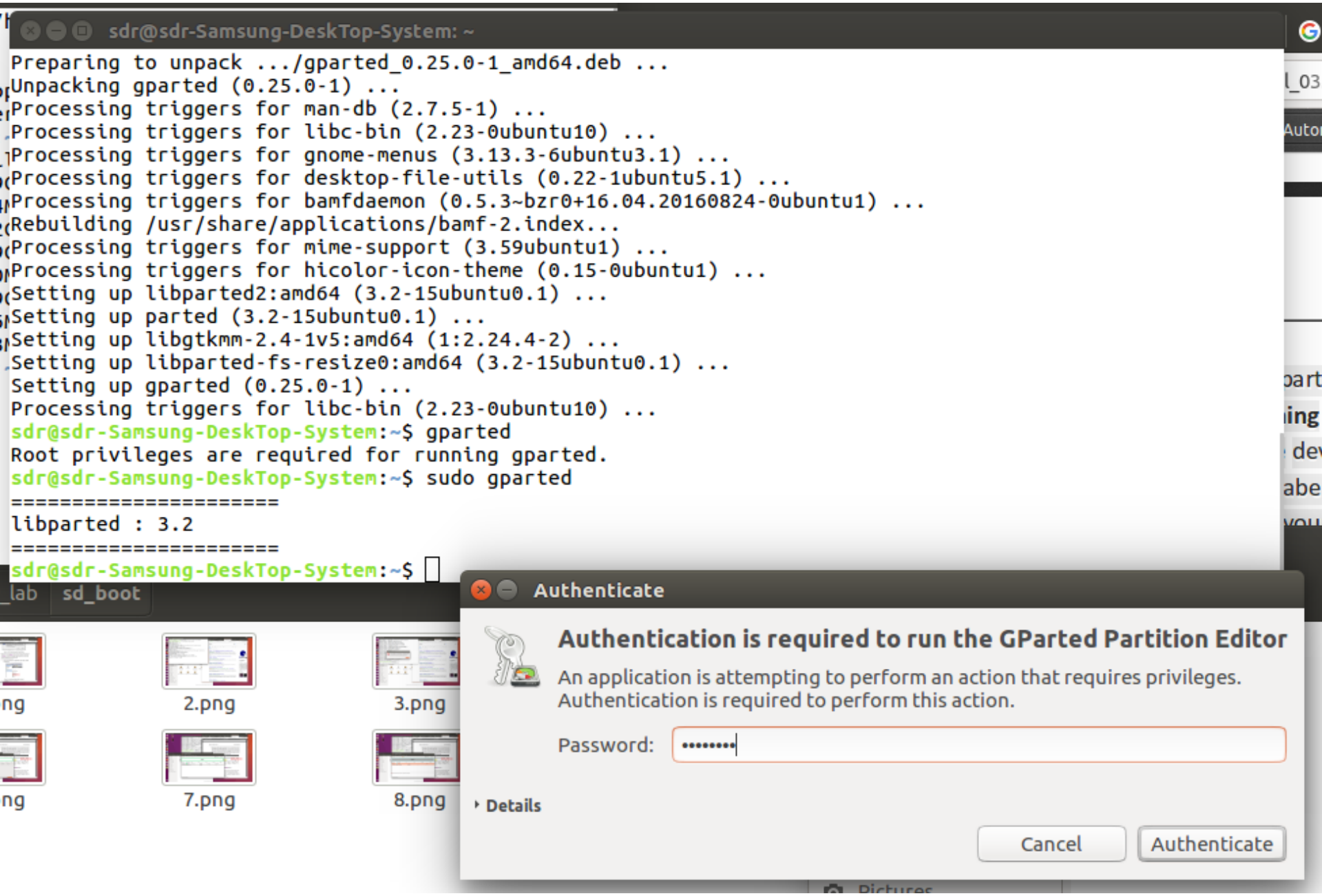

sdr@sdr-Samsung-DeskTop-System: ~
sdr@sdr-Samsung-DeskTop-System:~$ gparted
The program 'gparted' is currently not installed. You can install it by typing:
sudo apt install gparted
sdr@sdr-Samsung-DeskTop-System:~$ sudo apt-get install gparted
[sudo] password for sdr:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
cmake-data libjsoncpp1
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
libgtkmm-2.4-1v5 libparted-fs-resize0 libparted2 parted
Suggested packages:
xfsprogs reiserfsprogs reiser4progs jfsutils kpartx dmraid dmsetup gpart libparted-dev
libparted-i18n parted-doc
The following NEW packages will be installed:
gparted libgtkmm-2.4-1v5 libparted-fs-resize0
The following packages will be upgraded:
libparted2 parted
2 upgraded, 3 newly installed, 0 to remove and 219 not upgraded.
Need to get 1,082 kB/1,287 kB of archives.
After this operation, 6,973 kB of additional disk space will be used.
Do you want to continue? [Y/n]


sdr@sdr-Samsung-DeskTop-System: ~
Fetched 1,082 kB in 4s (220 kB/s)
(Reading database ... 228633 files and directories currently installed.)
Preparing to unpack .../parted_3.2-15ubuntu0.1_amd64.deb ...
Unpacking parted (3.2-15ubuntu0.1) over (3.2-15) ...
Preparing to unpack .../libparted2_3.2-15ubuntu0.1_amd64.deb ...
Unpacking libparted2:amd64 (3.2-15ubuntu0.1) over (3.2-15) ...
Selecting previously unselected package libgtkmm-2.4-1v5:amd64.
Preparing to unpack .../libgtkmm-2.4-1v5_1%3a2.24.4-2_amd64.deb ...
Unpacking libgtkmm-2.4-1v5:amd64 (1:2.24.4-2) ...
Selecting previously unselected package libparted-fs-resize0:amd64.
Preparing to unpack .../libparted-fs-resize0_3.2-15ubuntu0.1_amd64.deb ...
Unpacking libparted-fs-resize0:amd64 (3.2-15ubuntu0.1) ...
Selecting previously unselected package gparted.
Preparing to unpack .../gparted_0.25.0-1_amd64.deb ...
Unpacking gparted (0.25.0-1) ...
Processing triggers for man-db (2.7.5-1) ...
Processing triggers
Processing triggers
Processing triggers
Processing triggers
Rebuilding /usr/sha
Processing triggers
Processing triggers
Setting up libparte
Setting up parted (
Setting up libgtkmm
Setting up libparted-fs-resize0:amd64 (3.2-15ubuntu0.1) ...
Setting up gparted (0.25.0-1) ...
Processing triggers for libc-bin (2.23-0ubuntu10) ...
sdr@sdr-Samsung-DeskTop-System:~$ gparted
Root privileges are required for running gparted.
Root privileges are required for running GParted
Since GParted is a powerful tool capable of destroying partition tables and vast amounts of data, only root may run it.
OK

아래와 같이 실행할 수도 있다.




sdr@sdr-Samsung-DeskTop-System: ~
Preparing to unpack .../gparted_0.25.0-1_amd64.deb ...
Unpacking gparted (0.25.0-1) ...
Processing triggers for man-db (2.7.5-1) ...
Processing triggers for libc-bin (2.23-0ubuntu10) ...
Processing triggers for gnome-menus (3.13.3-6ubuntu3.1) ...
Processing triggers for desktop-file-utils (0.22-1ubuntu5.1) ...
Processing triggers for bamfdaemon (0.5.3~bzr0+16.04.20160824-0ubuntu1) ...
Rebuilding /usr/share/applications/bamf-2.index...
Processing triggers for mime-support (3.59ubuntu1) ...
Processing triggers for hicolor-icon-theme (0.15-0ubuntu1) ...
Setting up libparted2:amd64 (3.2-15ubuntu0.1) ...
Setting up parted (3.2-15ubuntu0.1) ...
Setting up libgtkmm-2.4-1v5:amd64 (1:2.24.4-2) ...
Setting up libparted-fs-resize0:amd64 (3.2-15ubuntu0.1) ...
Setting up gparted (0.25.0-1) ...
Processing triggers for libc-bin (2.23-0ubuntu10) ...
sdr@sdr-Samsung-DeskTop-System:~$ gparted
Root privileges are required for running gparted.
sdr@sdr-Samsung-DeskTop-System:~$ sudo gparted
libparted : 3.2
sdr@sdr-Samsung-DeskTop-System:~$
Authenticate
Authentication is required to run the GParted Partition Editor
An application is attempting to perform an action that requires privileges.
Authentication is required to perform this action.
Password:
Details
Cancel
Authenticate
2.png
3.png
7.png
8.png

```
sdr@sdr-Samsung-DeskTop-System:~$ gparted
Root privileges are required for running gparted.
sdr@sdr-Samsung-DeskTop-System:~$ sudo gparted
======================
libparted : 3.2
======================
```

Gparted -> Devices 에서 SD 카드에 해당하는 장치를 선택한다.

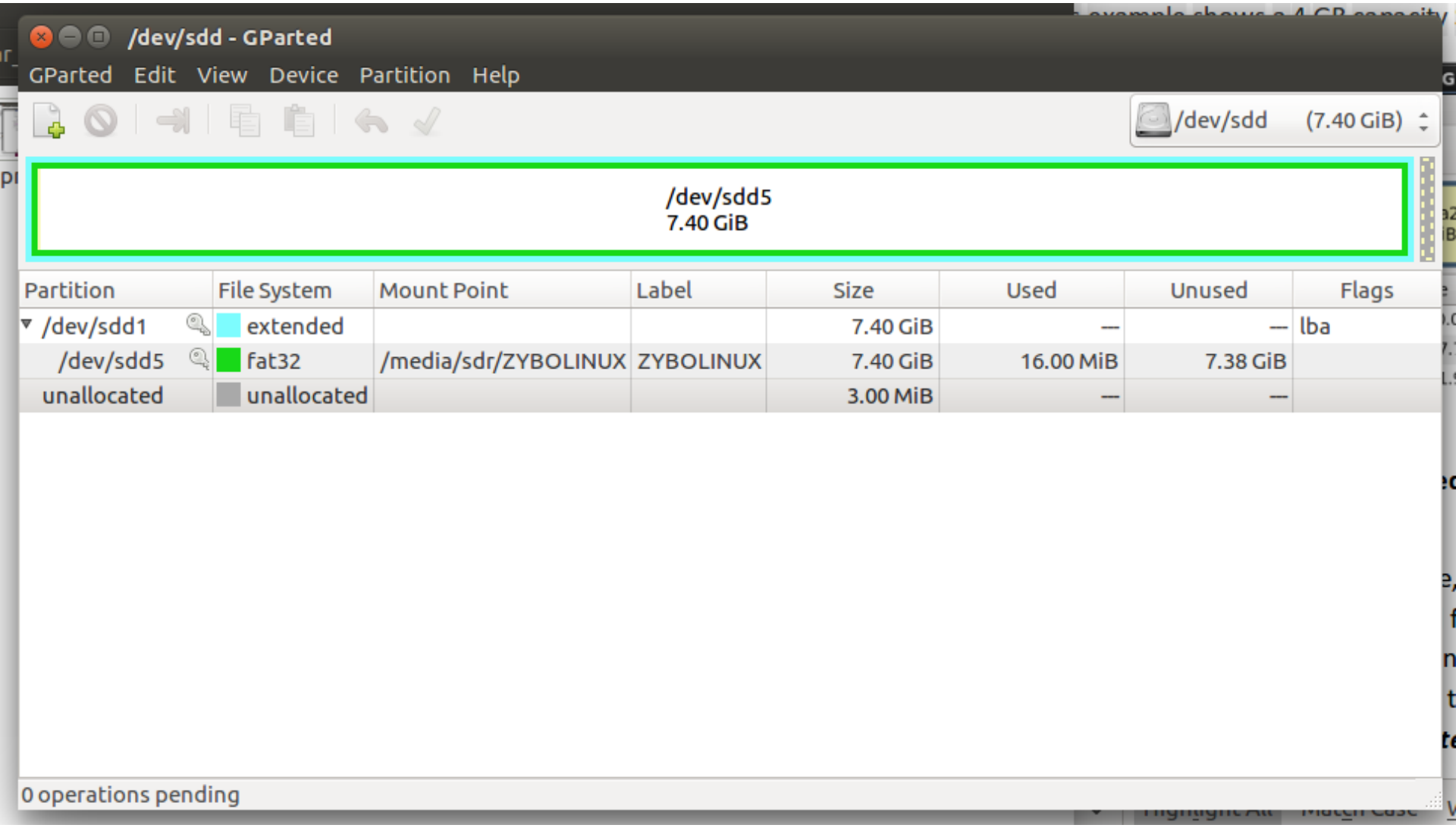
/dev/sda - GParted

GParted Edit View Device Partition Help

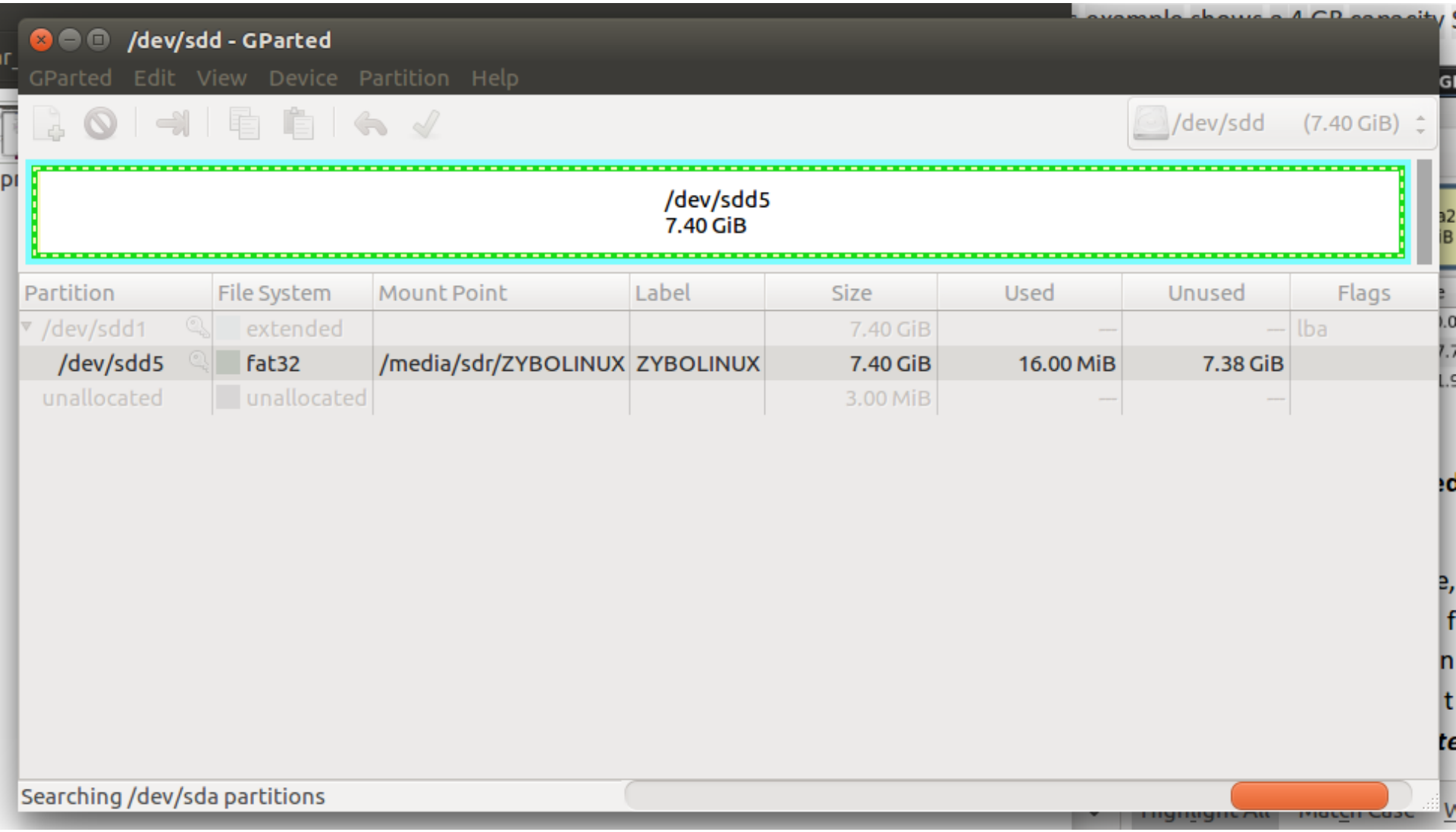
/dev/sda (119.24 GiB)

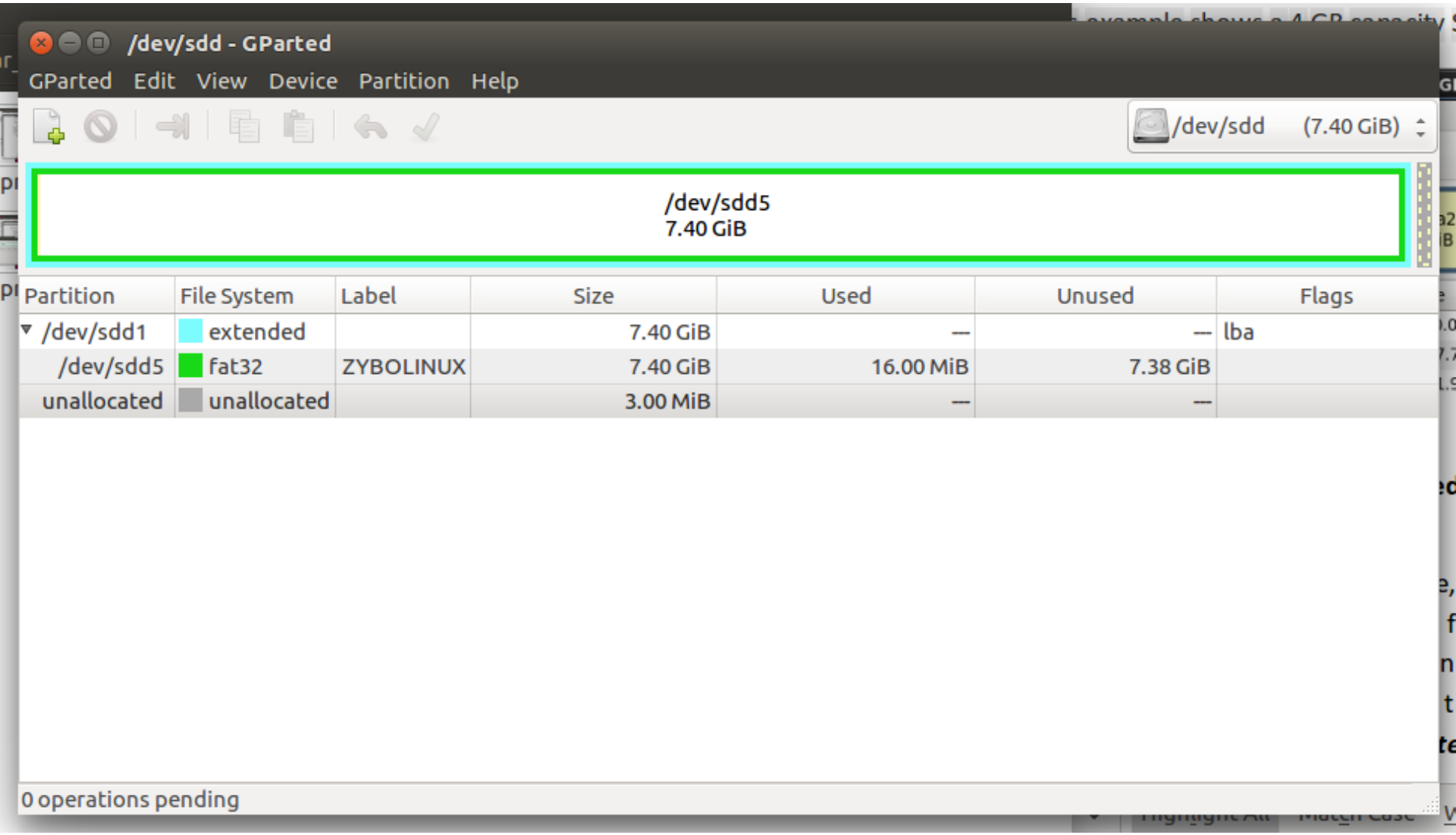
Partition	Name	File System	Mount Point	Label	Size	Used	Unused	Flags
/dev/sda1	Basic data partition	ntfs		Recovery	499.00 MiB	251.77 MiB	247.23 MiB	hidden, diag
/dev/sda2	EFI system partition	fat32	/boot/efi	SYSTEM	300.00 MiB	34.23 MiB	265.77 MiB	boot, esp
/dev/sda3	Microsoft reserved partition	unknown			128.00 MiB	---	---	msftres
/dev/sda4	Basic data partition	ntfs			117.33 GiB	82.82 GiB	34.51 GiB	msftdata
/dev/sda5	Basic data partition	fat32		RECOVERY	1.00 GiB	697.64 MiB	330.36 MiB	hidden, diag

0 operations pending

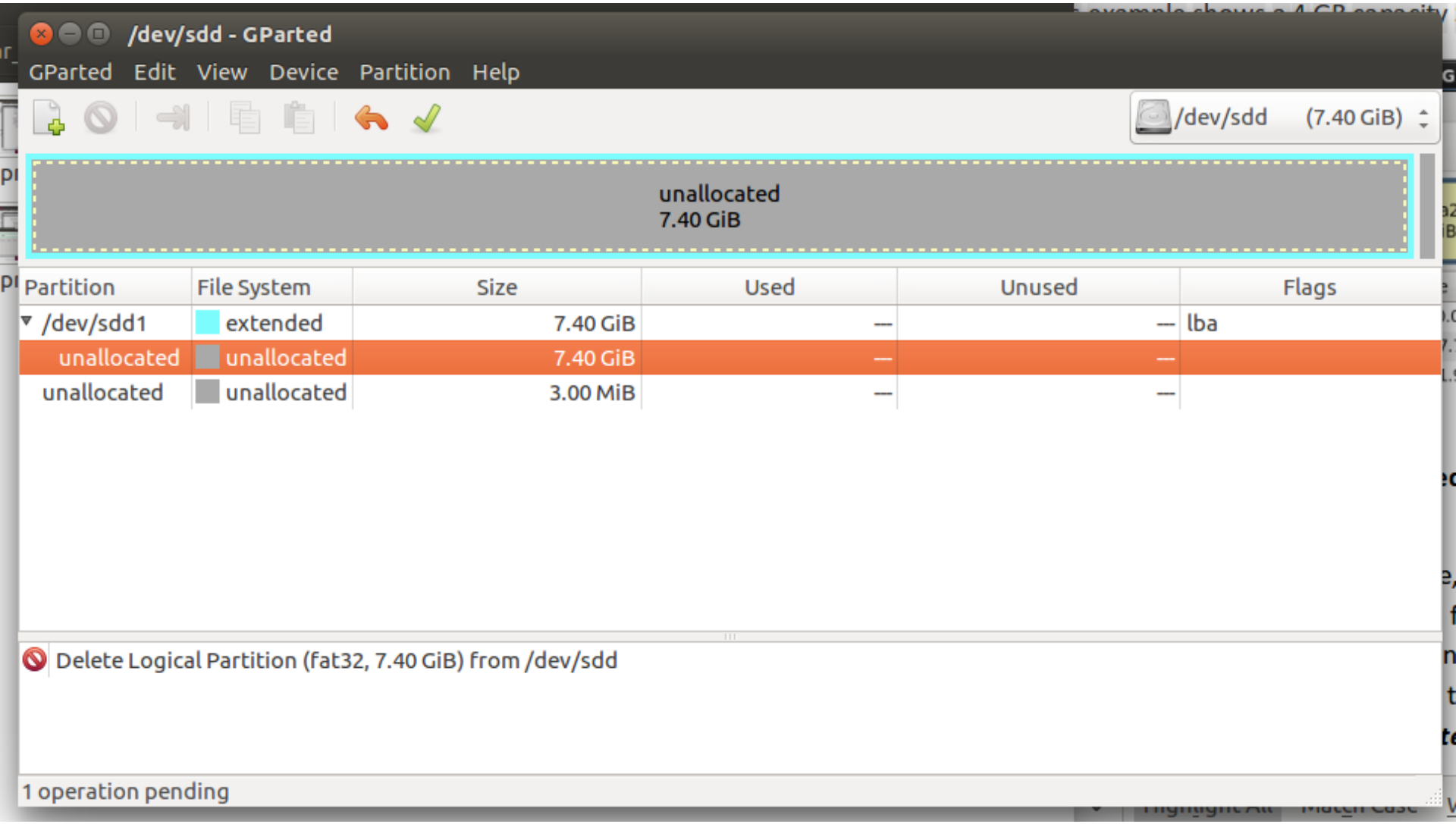

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
/dev/sdd5
7.40 GiB
Partition File System Mount Point Label Size Used Unused Flags
/dev/sdd1 extended 7.40 GiB --- --- lba
/dev/sdd5 fat32 /media/sdr/ZYBOLINUX ZYBOLINUX 7.40 GiB 16.00 MiB 7.38 GiB
unallocated unallocated 3.00 MiB --- ---
0 operations pending

파일 시스템이 fat32 인 부분을 우클릭하고 umount 한다.

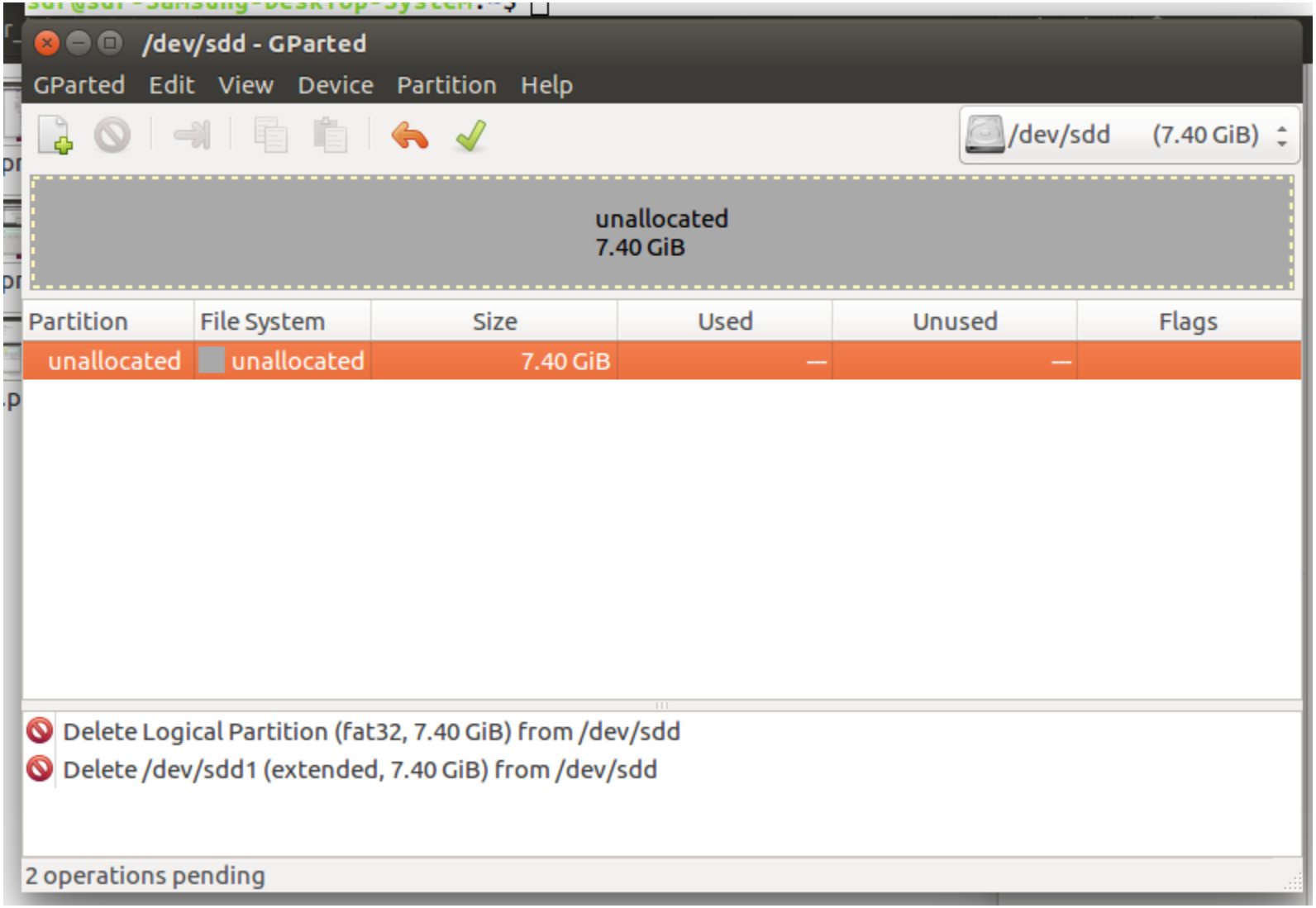


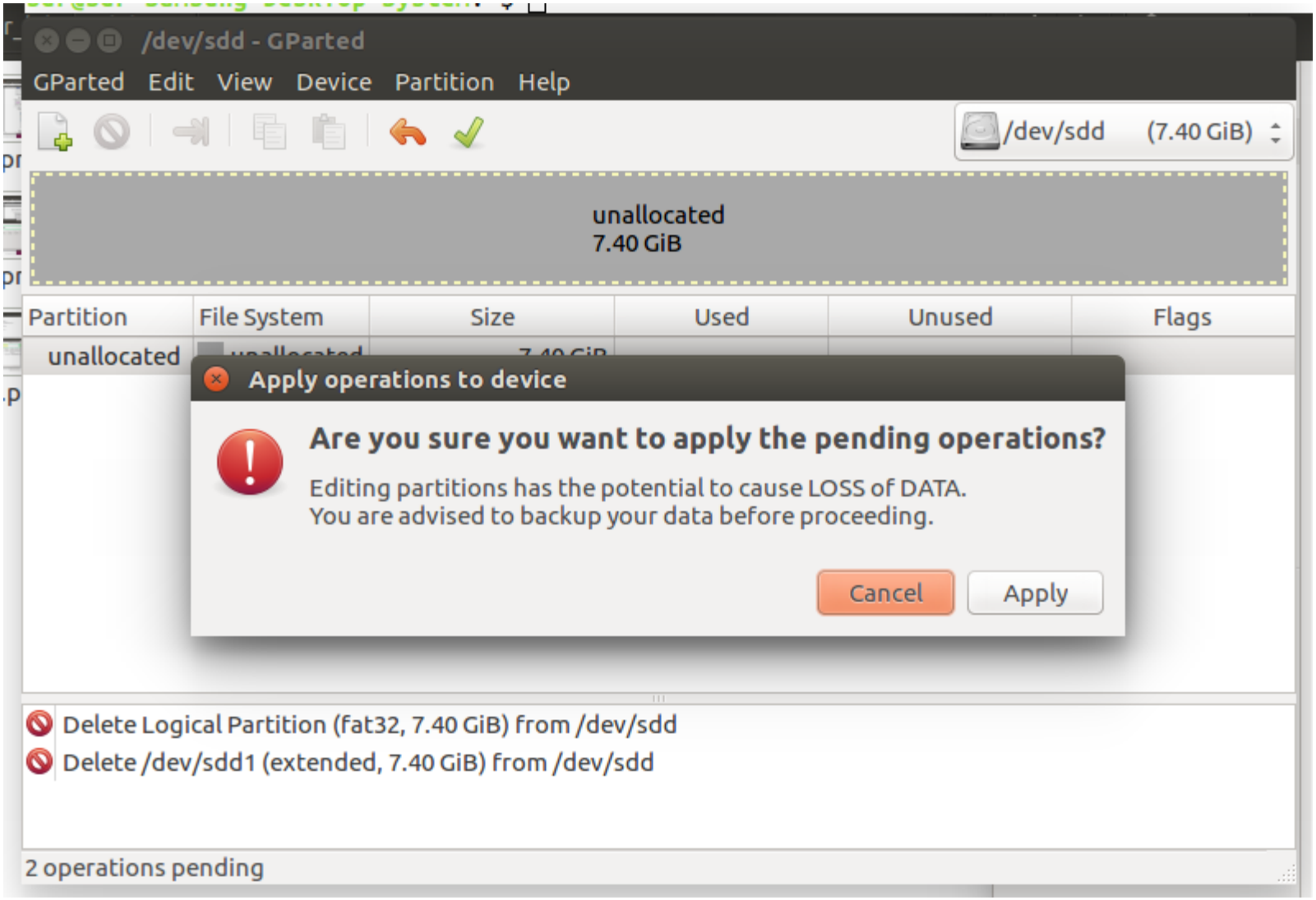

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
/dev/sdd5
7.40 GiB
Partition File System Label Size Used Unused Flags
/dev/sdd1 extended 7.40 GiB --- --- lba
/dev/sdd5 fat32 ZYBOLINUX 7.40 GiB 16.00 MiB 7.38 GiB
unallocated unallocated 3.00 MiB --- ---
0 operations pending

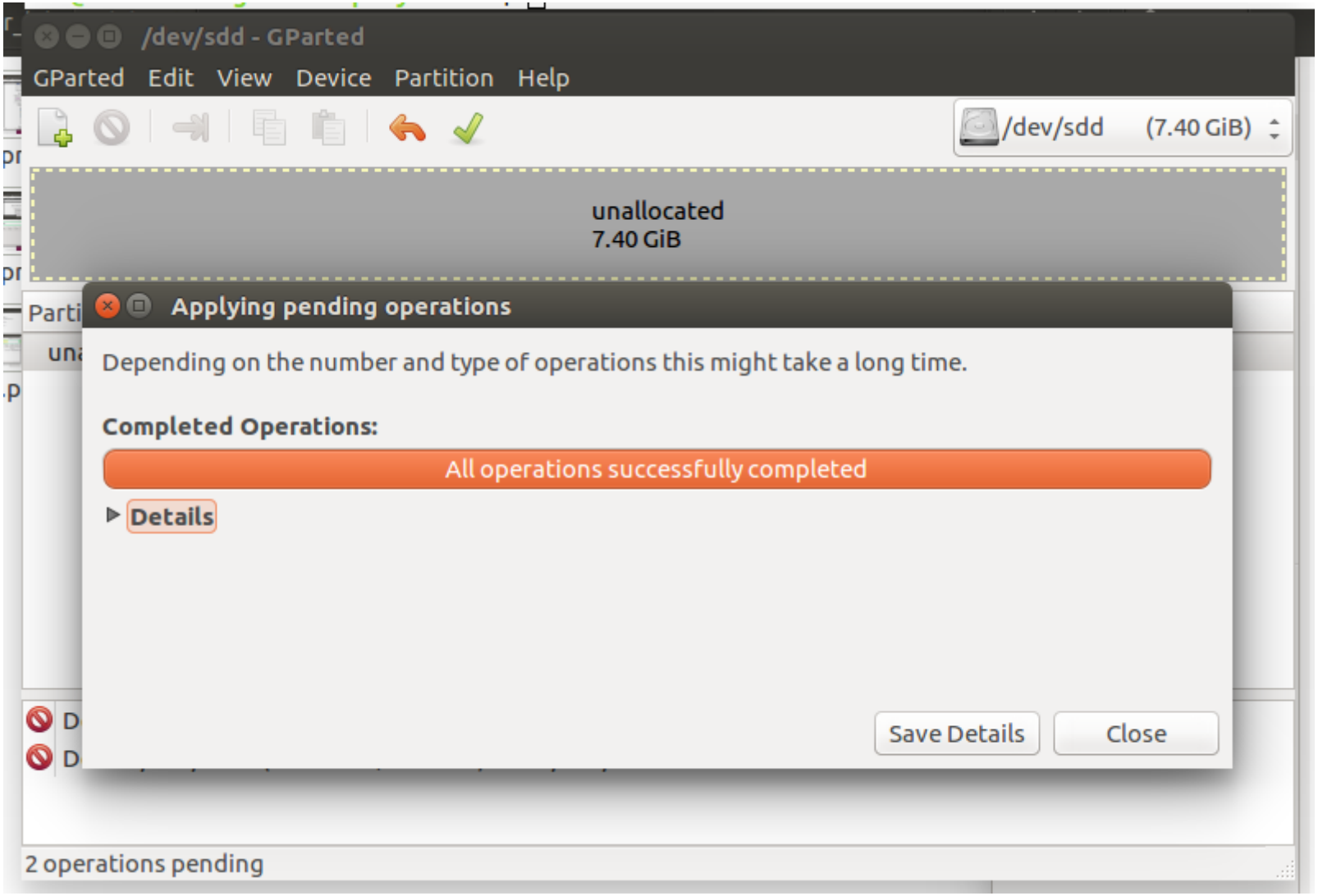
파일 시스템이 fat32 인 부분을 우클릭하고 delete 한다.



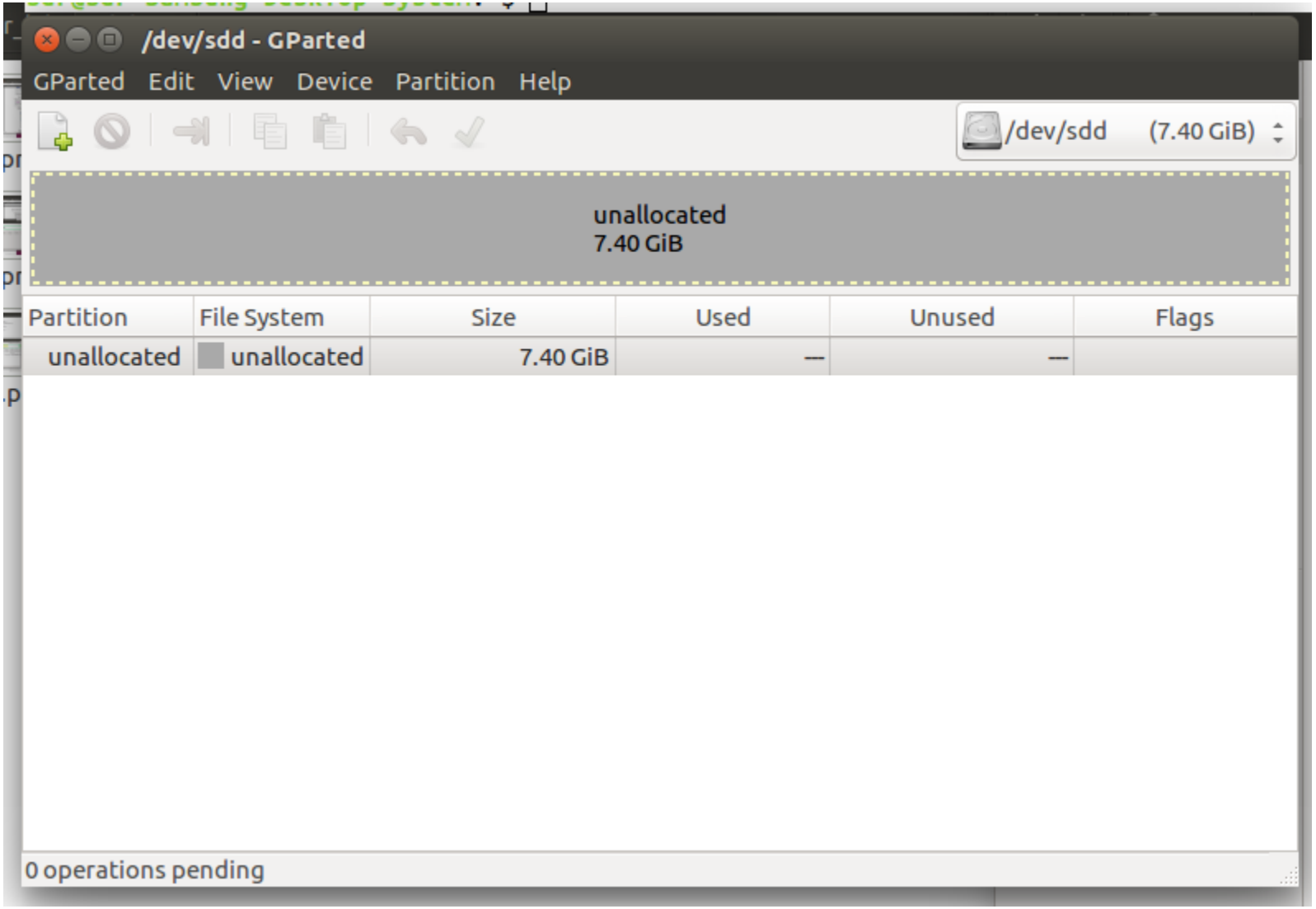
남아 있는 Extended 부분도 마저 delete 한다.

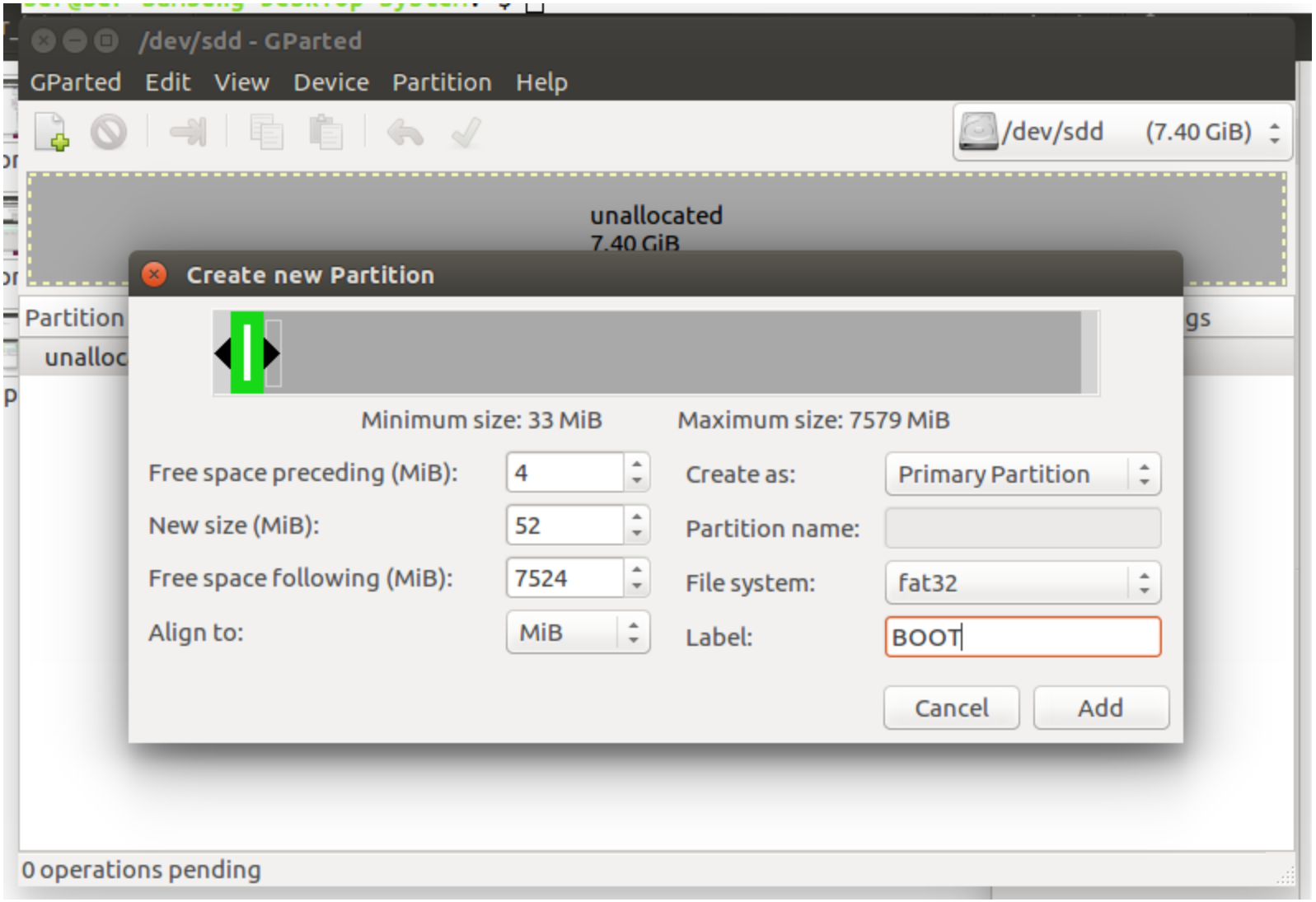



/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
unallocated
7.40 GiB
Partition File System Size Used Unused Flags
unallocated
Apply operations to device
Are you sure you want to apply the pending operations?
Editing partitions has the potential to cause LOSS of DATA.
You are advised to backup your data before proceeding.
Cancel
Apply
Delete Logical Partition (fat32, 7.40 GiB) from /dev/sdd
Delete /dev/sdd1 (extended, 7.40 GiB) from /dev/sdd
2 operations pending

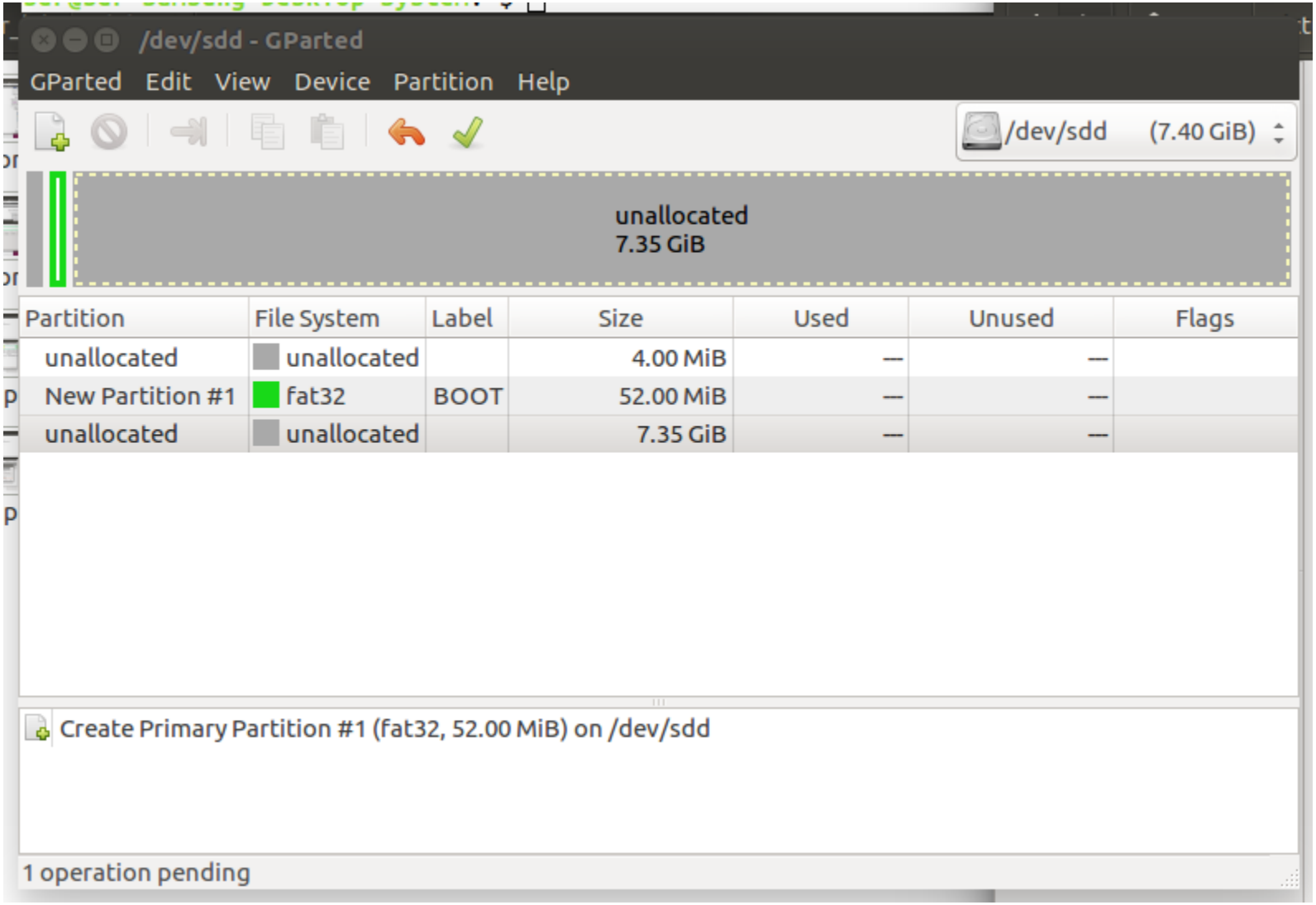

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
unallocated
7.40 GiB
Applying pending operations
Depending on the number and type of operations this might take a long time.
Completed Operations:
All operations successfully completed
Details
Save Details
Close
2 operations pending

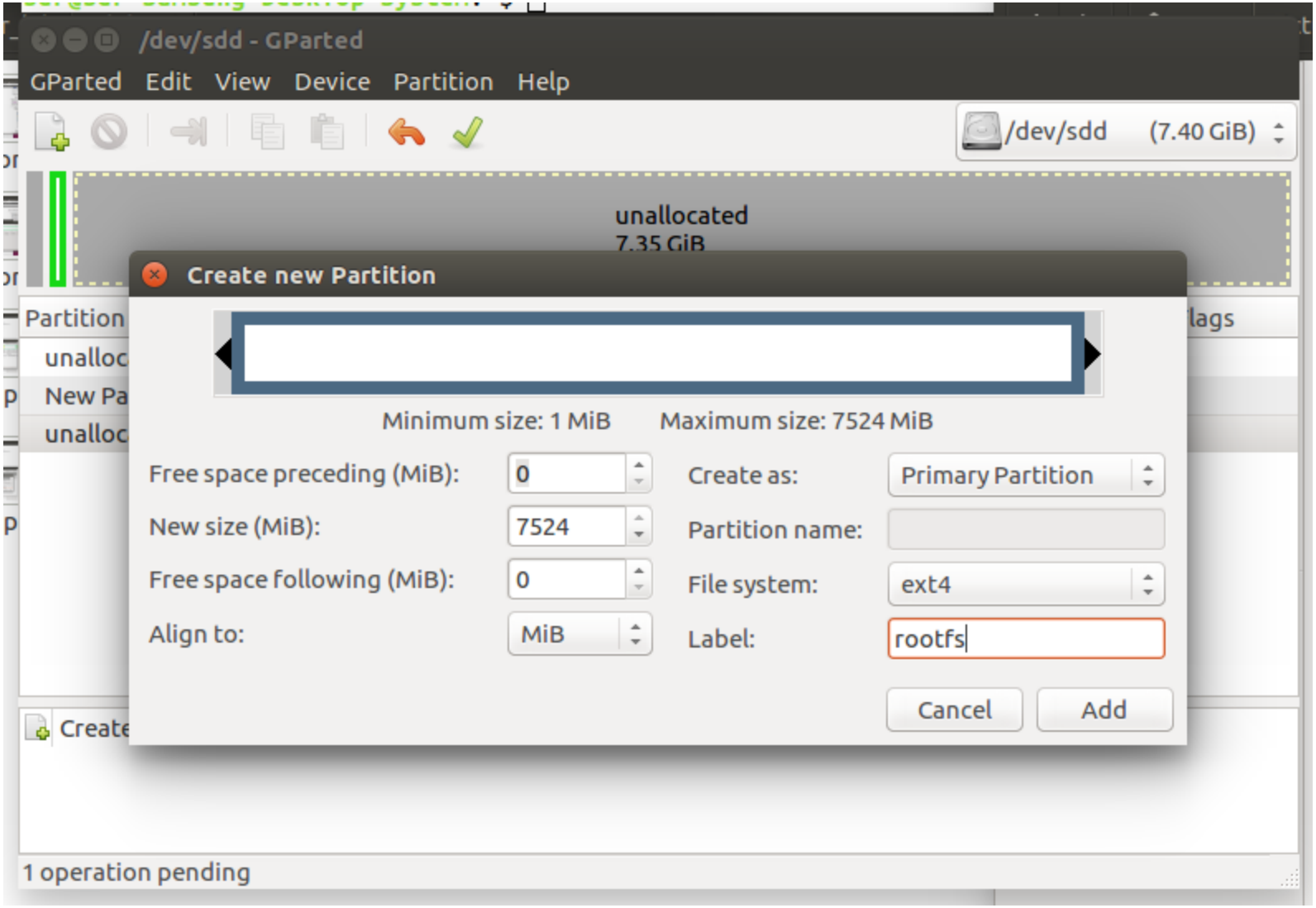
여기서 이제 우클릭하고 New 를 누른다.

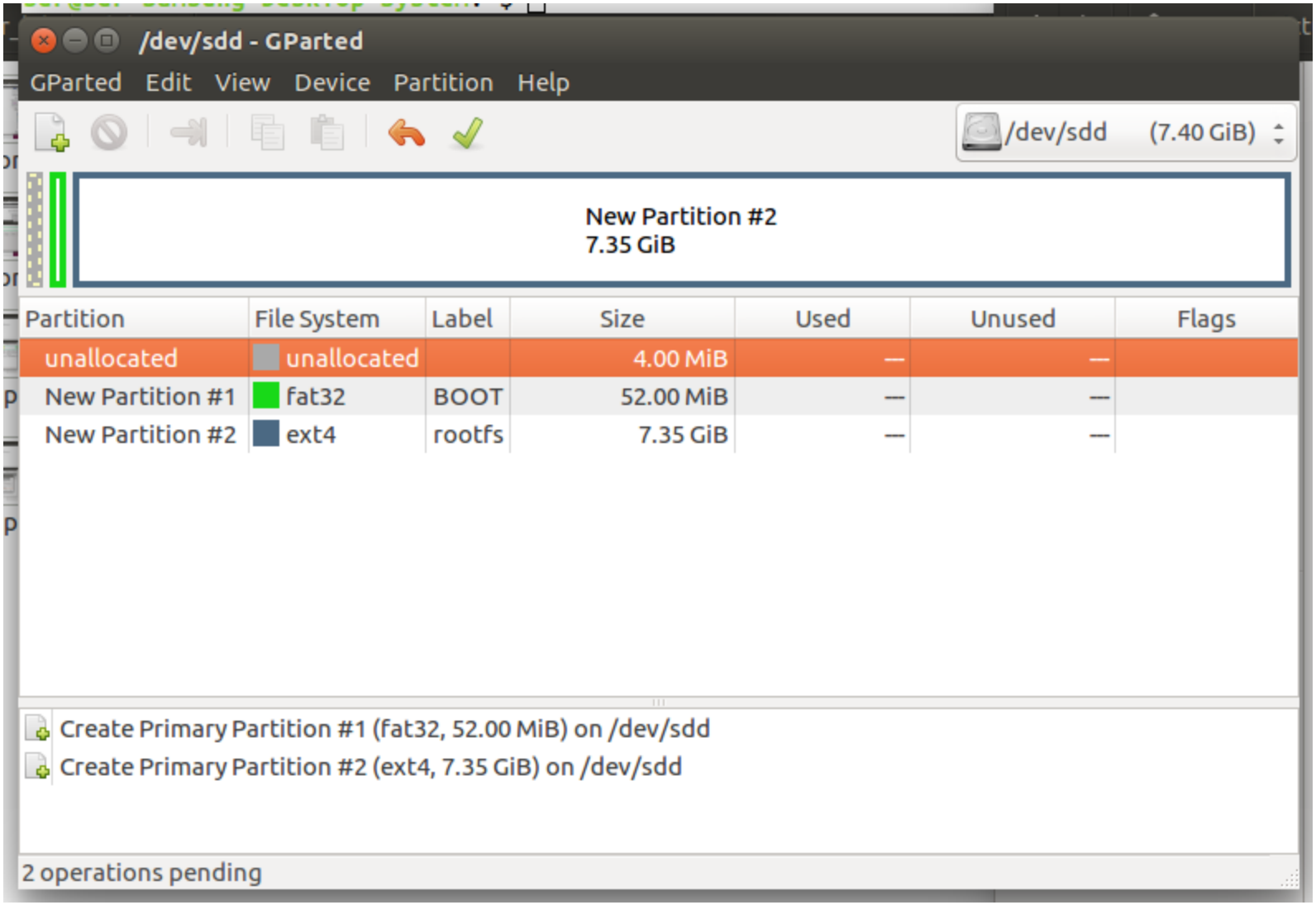


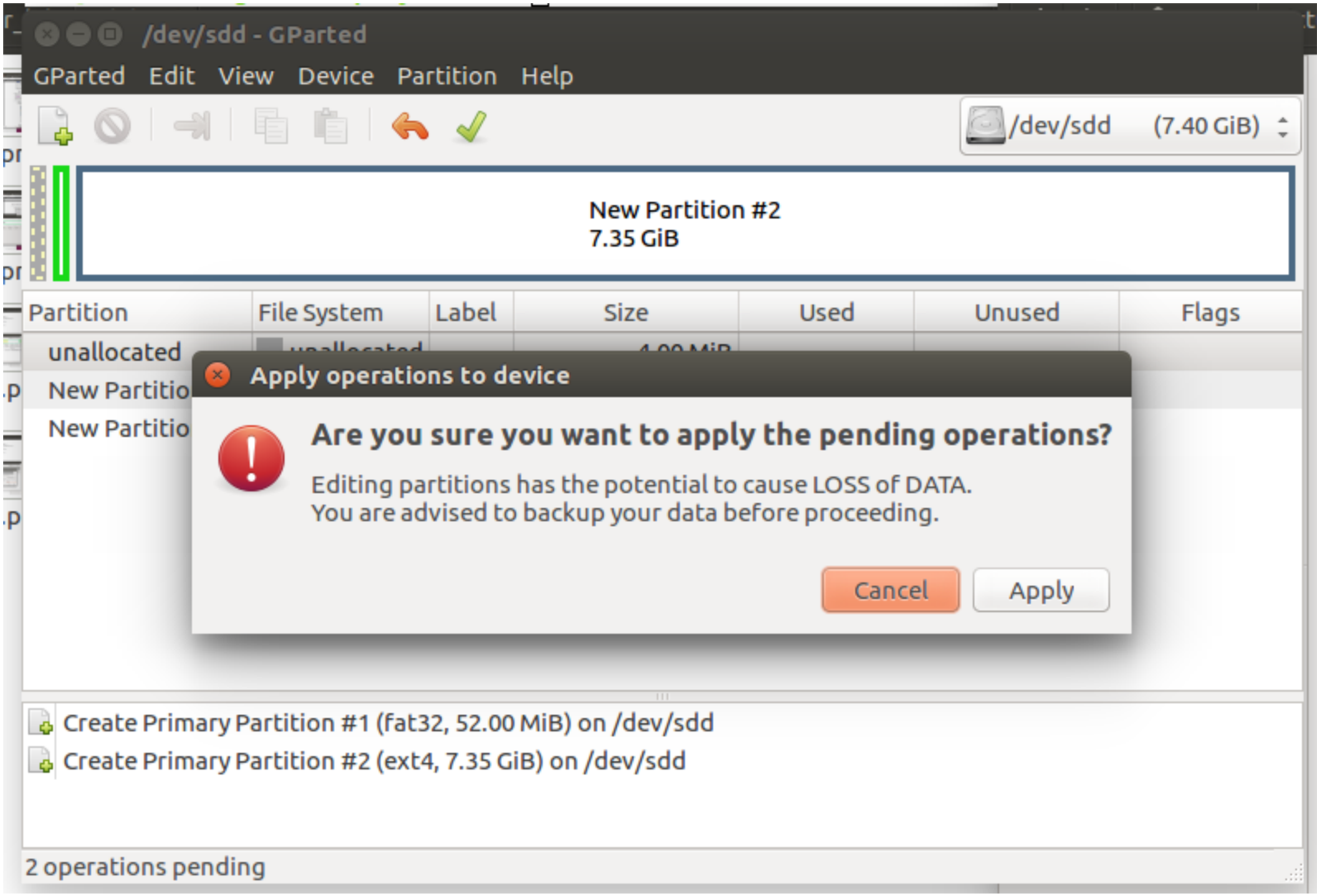

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
unallocated
7.40 GiB
Create new Partition
Minimum size: 33 MiB
Maximum size: 7579 MiB
Free space preceding (MiB): 4
New size (MiB): 52
Free space following (MiB): 7524
Align to: MiB
Create as: Primary Partition
Partition name:
File system: fat32
Label: BOOT
Cancel
Add
0 operations pending

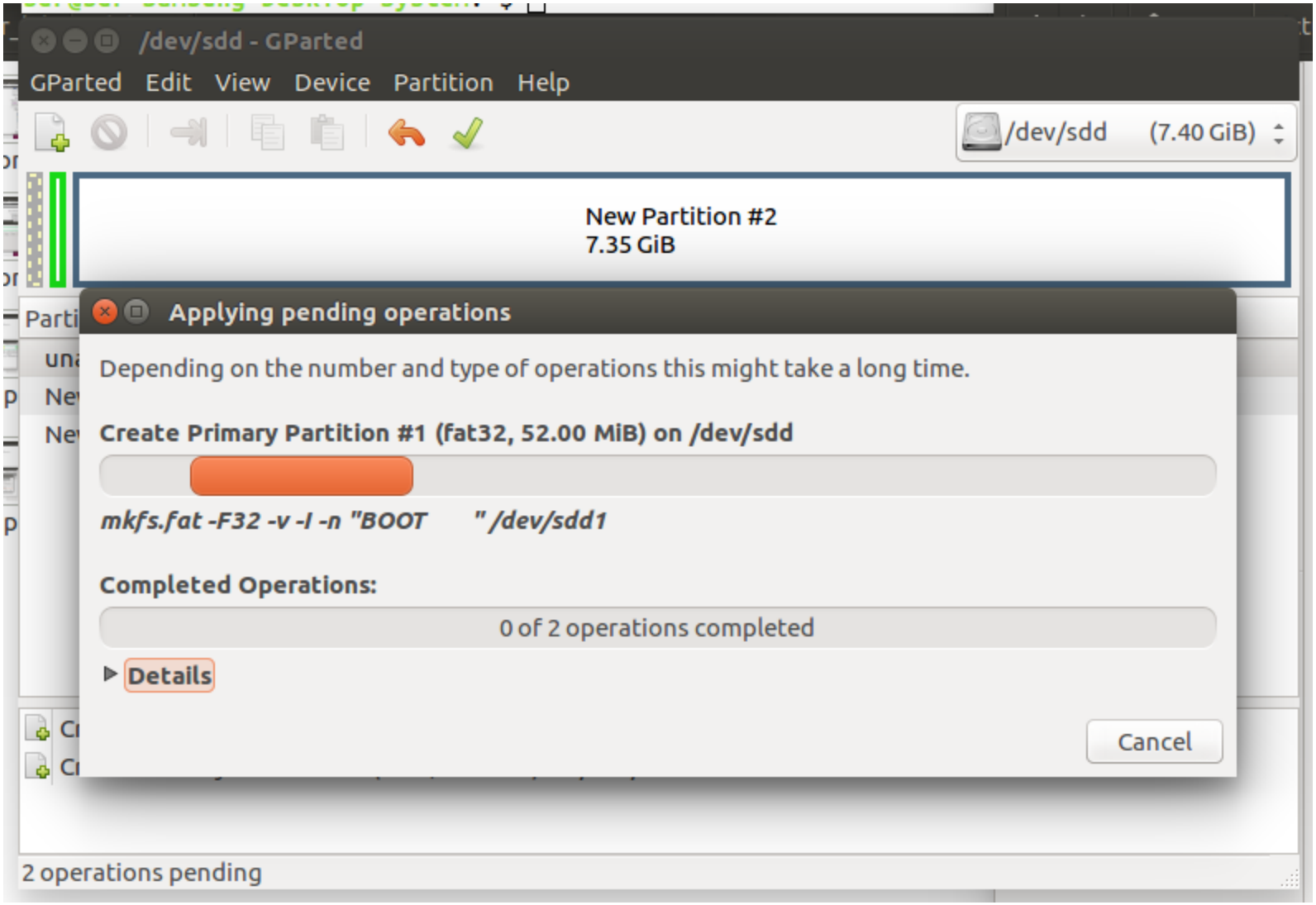
아래쪽 공간이 큰 녀석을 우클릭해서 New 한다.

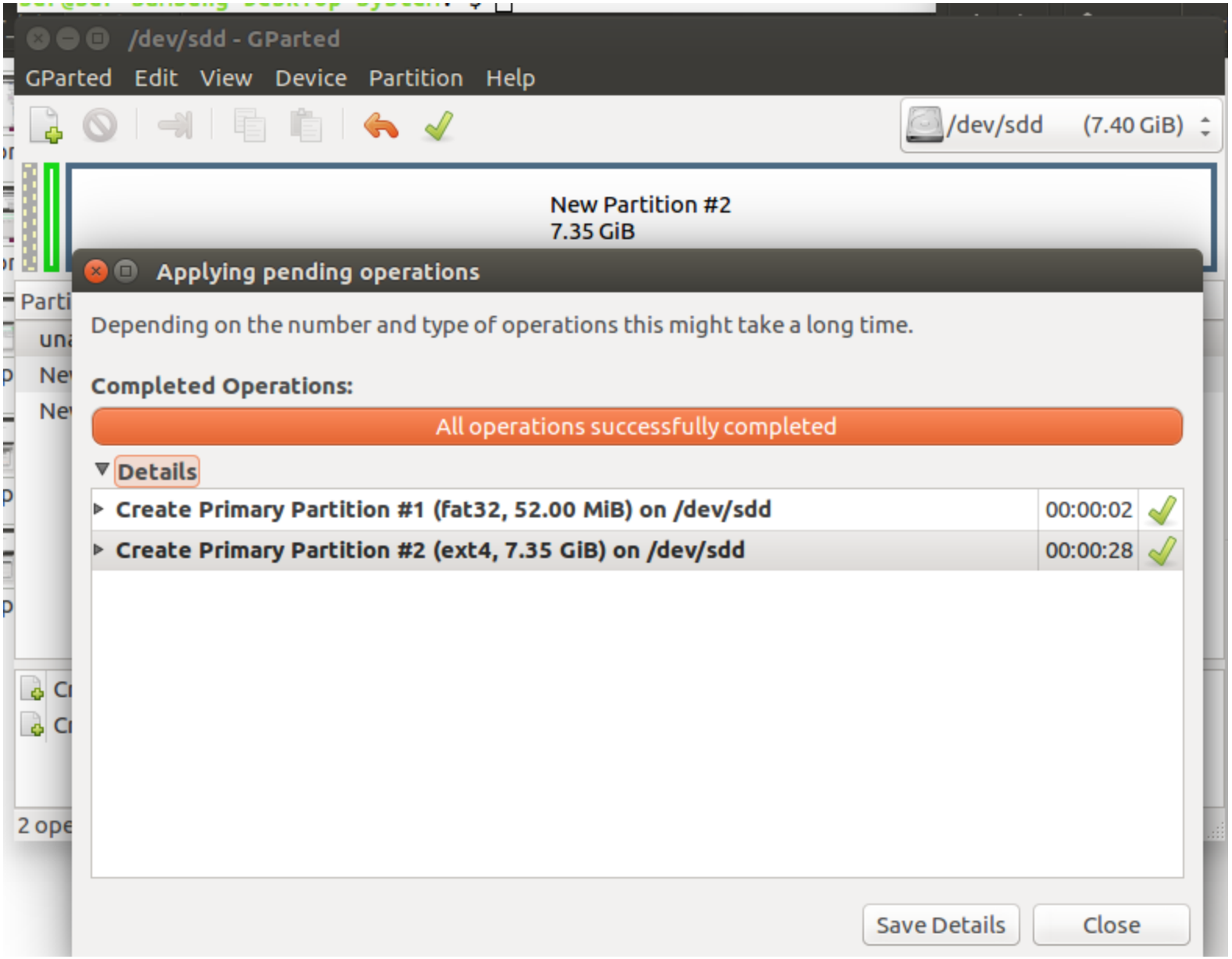


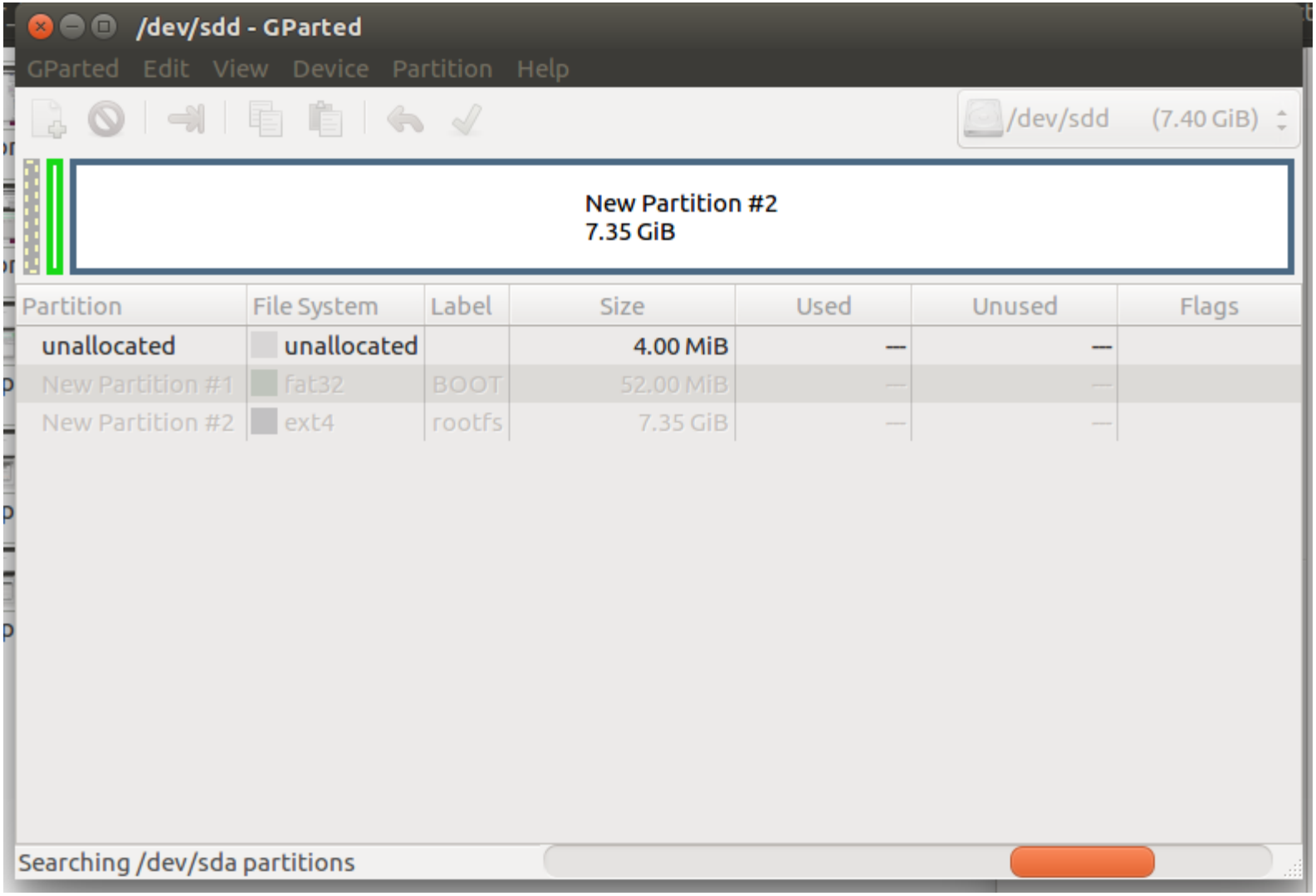

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
unallocated
7.35 GiB
Create new Partition
Minimum size: 1 MiB
Maximum size: 7524 MiB
Free space preceding (MiB): 0
New size (MiB): 7524
Free space following (MiB): 0
Align to: MiB
Create as: Primary Partition
Partition name:
File system: ext4
Label: rootfs
Cancel
Add
1 operation pending

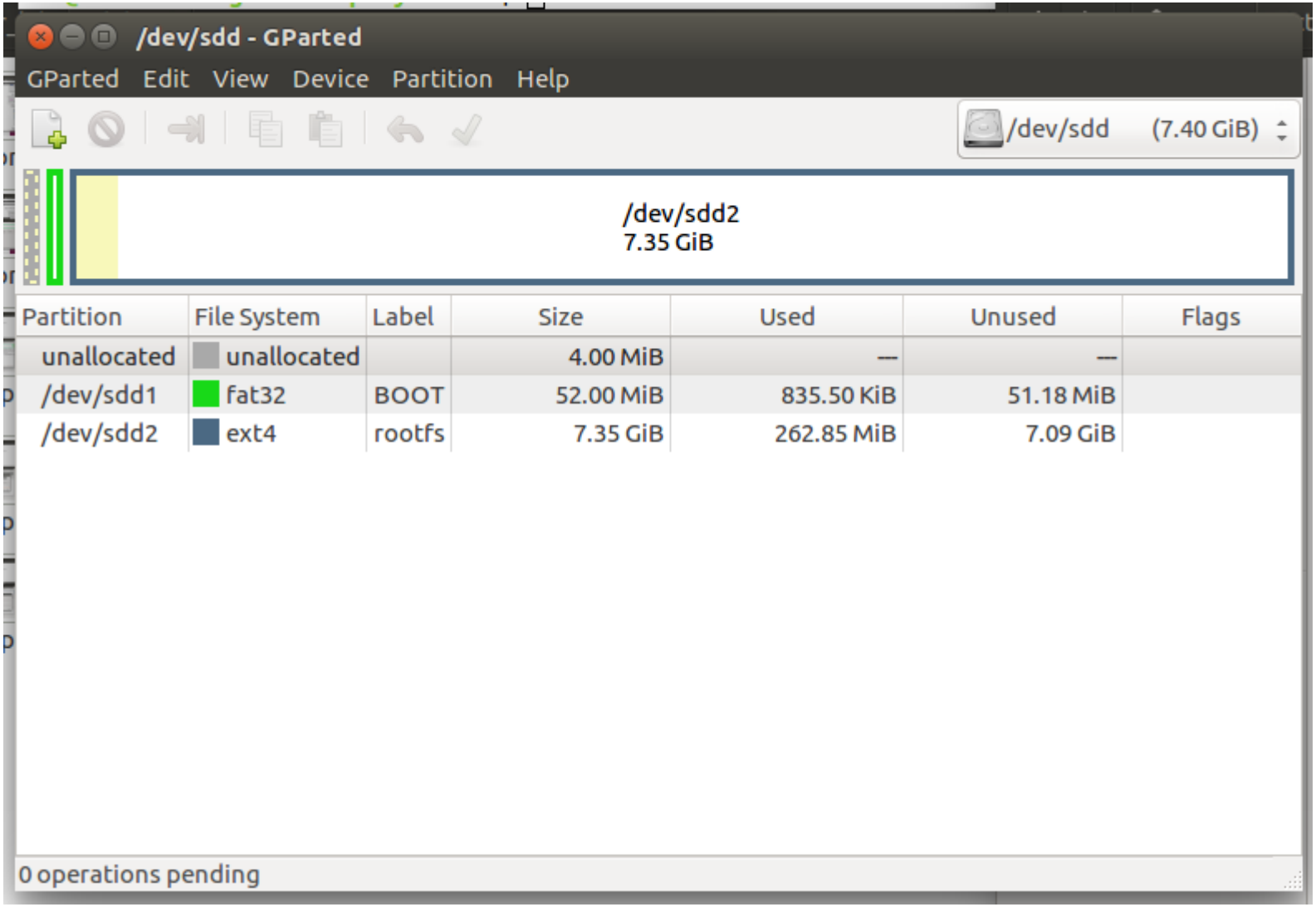

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
New Partition #2
7.35 GiB
Partition File System Label Size Used Unused Flags
unallocated unallocated 4.00 MiB — —
New Partition #1 fat32 BOOT 52.00 MiB — —
New Partition #2 ext4 rootfs 7.35 GiB — —
Create Primary Partition #1 (fat32, 52.00 MiB) on /dev/sdd
Create Primary Partition #2 (ext4, 7.35 GiB) on /dev/sdd
2 operations pending

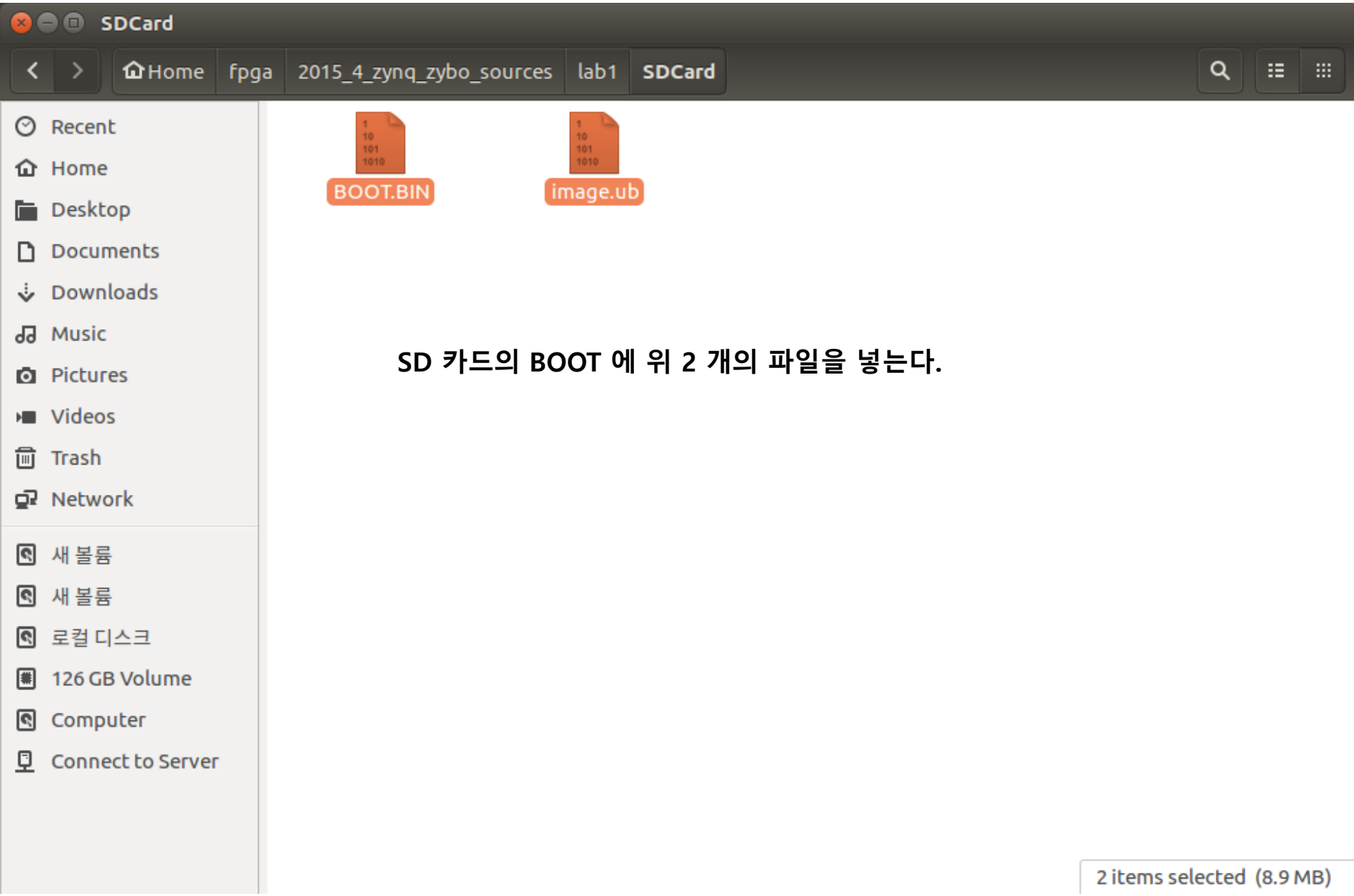

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
New Partition #2
7.35 GiB
Partition File System Label Size Used Unused Flags
unallocated
New Partitio
New Partitio
Apply operations to device
Are you sure you want to apply the pending operations?
Editing partitions has the potential to cause LOSS of DATA.
You are advised to backup your data before proceeding.
Cancel
Apply
Create Primary Partition #1 (fat32, 52.00 MiB) on /dev/sdd
Create Primary Partition #2 (ext4, 7.35 GiB) on /dev/sdd
2 operations pending

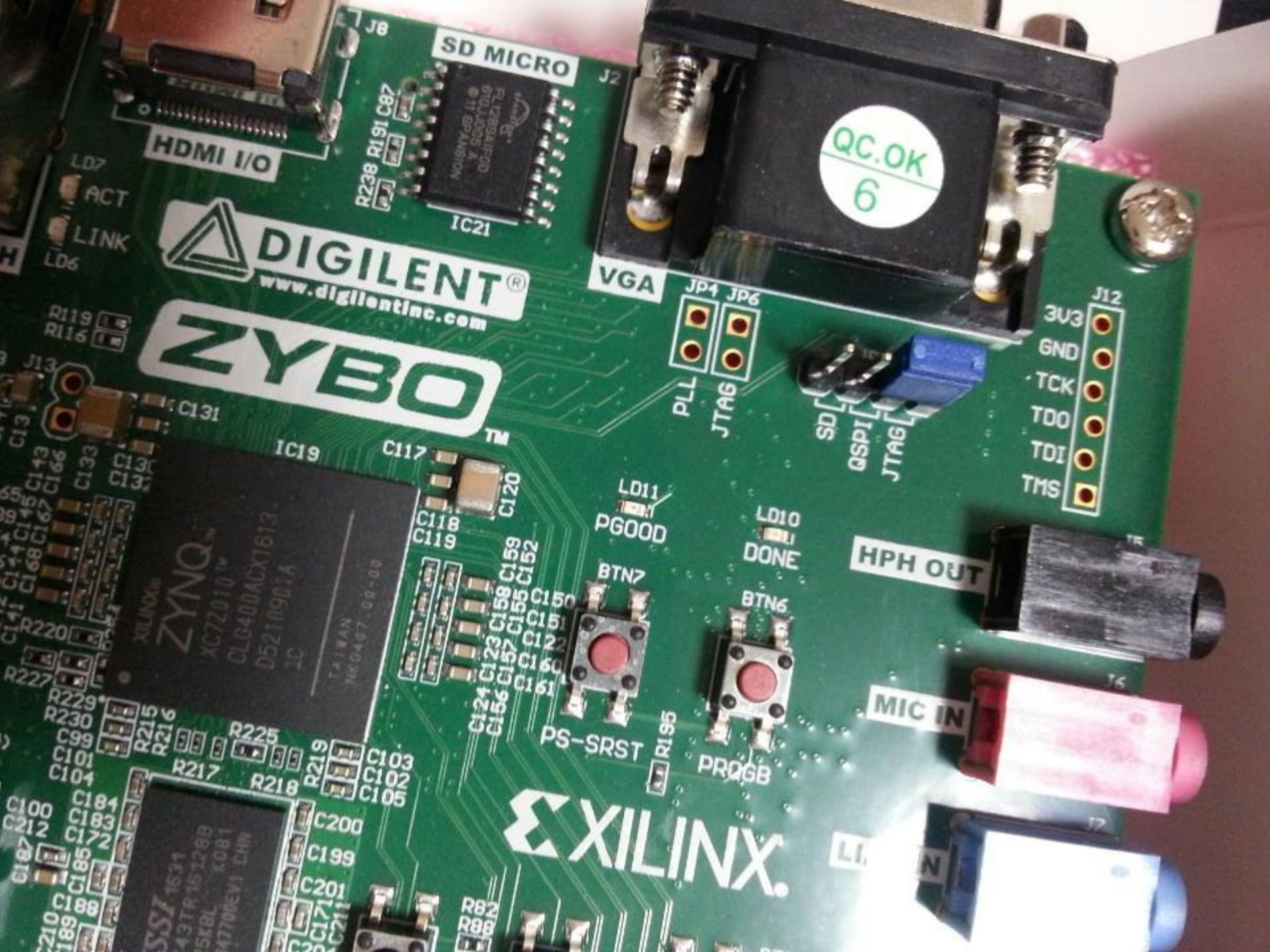

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
New Partition #2
7.35 GiB
Applying pending operations
Depending on the number and type of operations this might take a long time.
Create Primary Partition #1 (fat32, 52.00 MiB) on /dev/sdd
mkfs.fat -F32 -v -I -n "BOOT " /dev/sdd1
Completed Operations:
0 of 2 operations completed
Details
Cancel
2 operations pending


/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
New Partition #2
7.35 GiB
Applying pending operations
Depending on the number and type of operations this might take a long time.
Completed Operations:
All operations successfully completed
Details
Create Primary Partition #1 (fat32, 52.00 MiB) on /dev/sdd 00:00:02
Create Primary Partition #2 (ext4, 7.35 GiB) on /dev/sdd 00:00:28
Save Details
Close

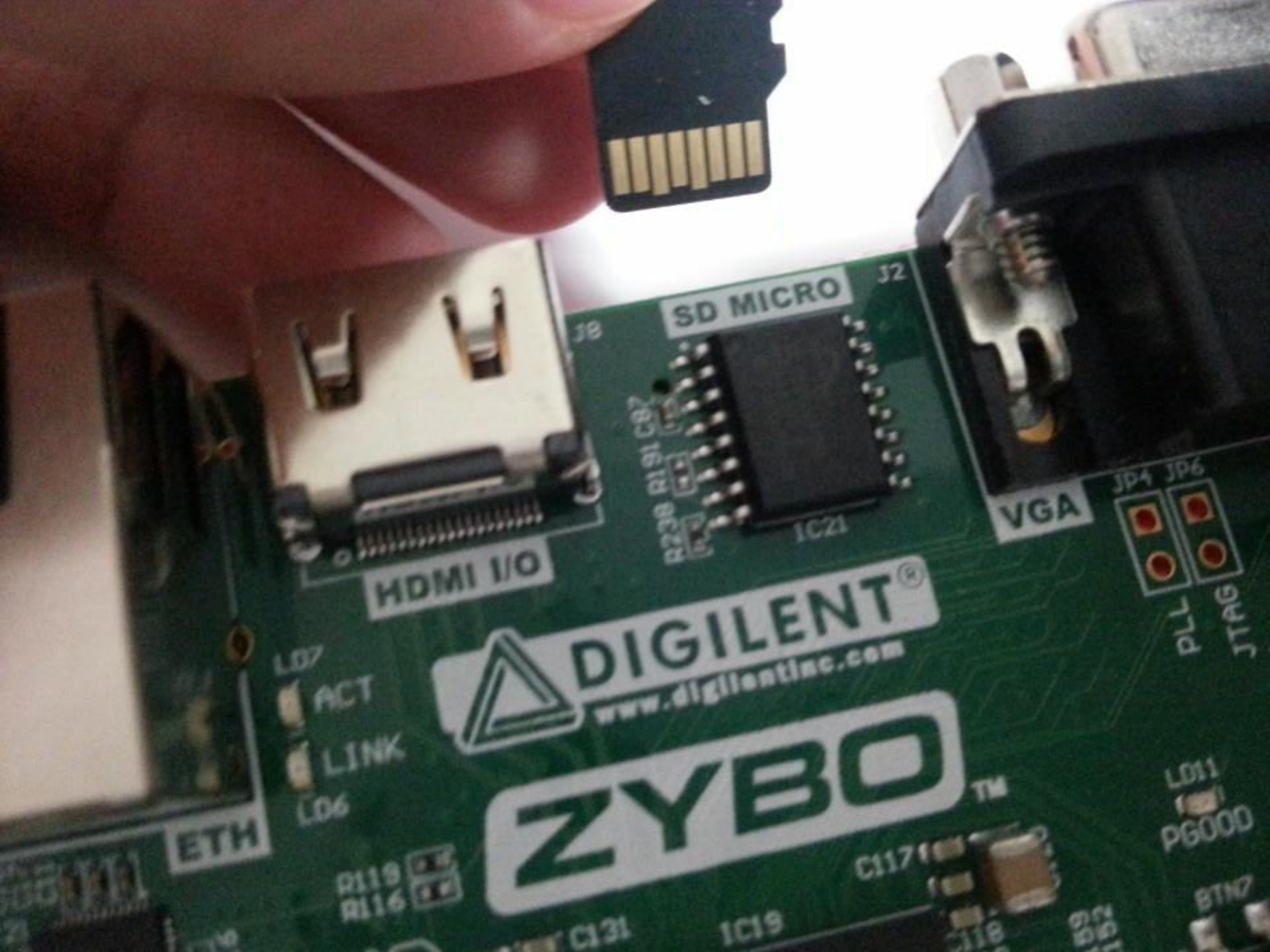

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
New Partition #2
7.35 GiB
Partition File System Label Size Used Unused Flags
unallocated unallocated 4.00 MiB — —
New Partition #1 fat32 BOOT 52.00 MiB — —
New Partition #2 ext4 rootfs 7.35 GiB — —
Searching /dev/sda partitions

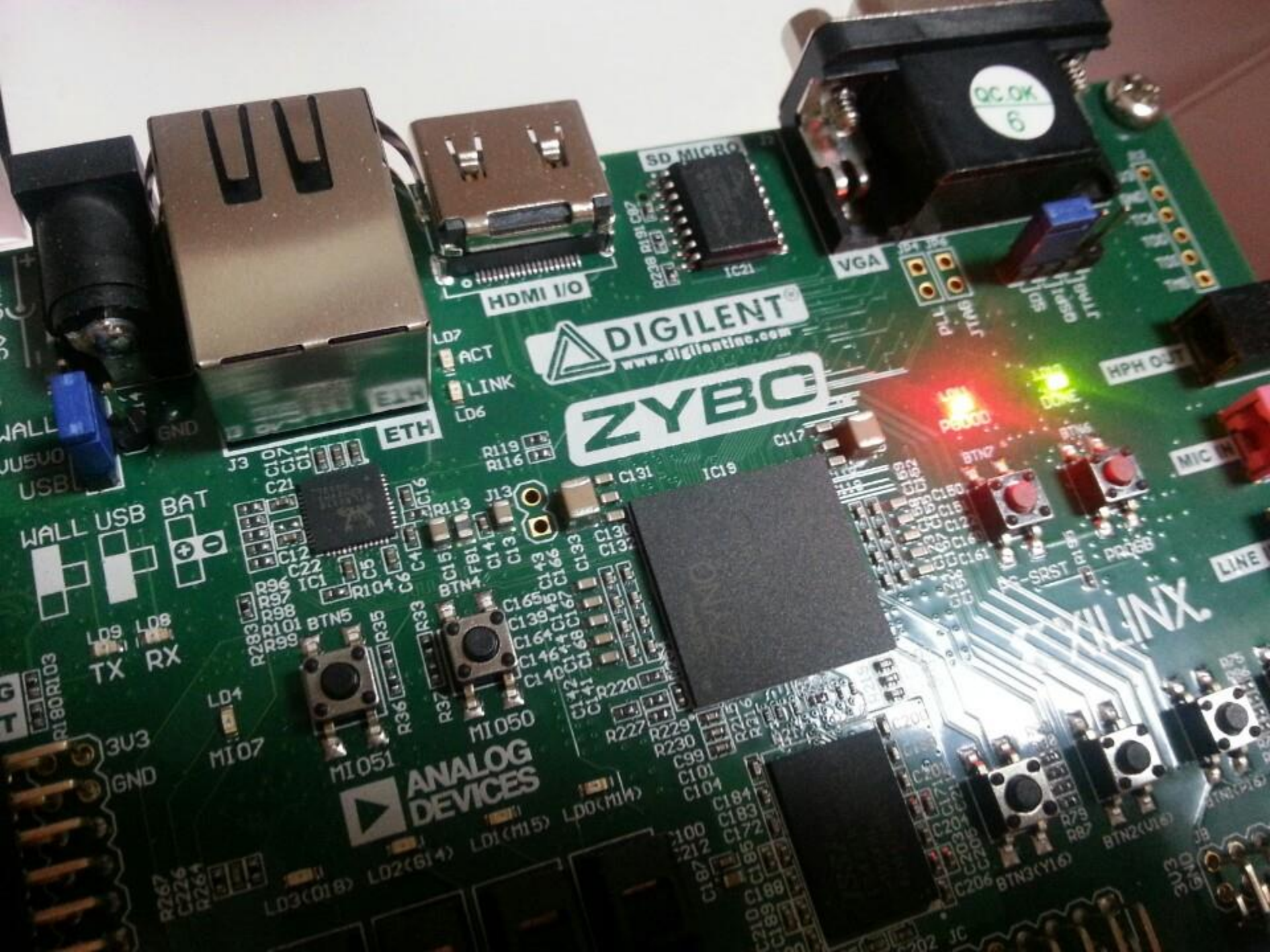

/dev/sdd - GParted
GParted Edit View Device Partition Help
/dev/sdd (7.40 GiB)
/dev/sdd2
7.35 GiB
Partition File System Label Size Used Unused Flags
unallocated unallocated 4.00 MiB — —
/dev/sdd1 fat32 BOOT 52.00 MiB 835.50 KiB 51.18 MiB
/dev/sdd2 ext4 rootfs 7.35 GiB 262.85 MiB 7.09 GiB
0 operations pending

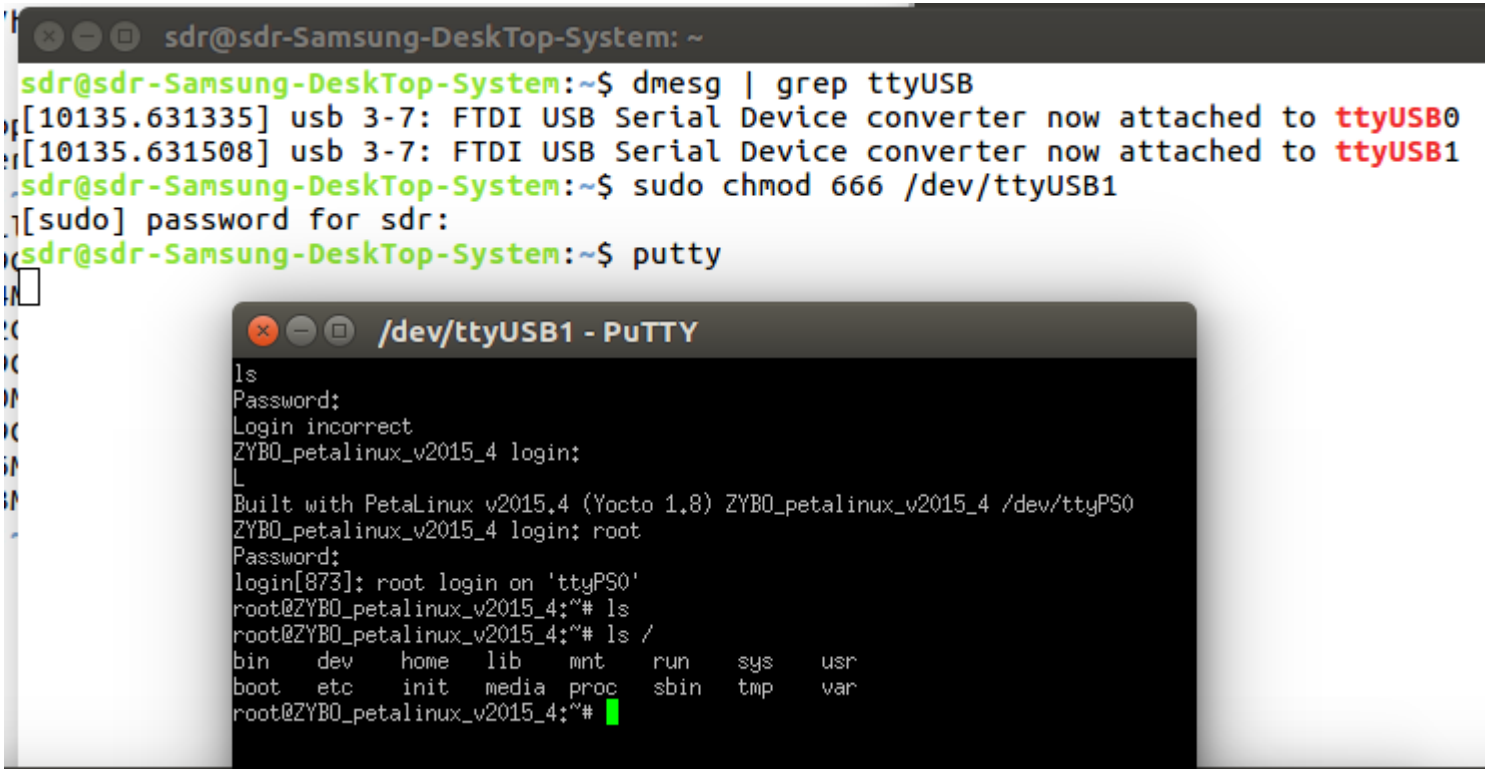

SDCard
Home
fpga
2015_4_zynq_zybo_sources
lab1
SDCard
Recent
Home
Desktop
Documents
Downloads
Music
Pictures
Videos
Trash
Network
새 볼륨
새 볼륨
로컬 디스크
126 GB Volume
Computer
Connect to Server
BOOT.BIN
image.ub
SD 카드의 BOOT 에 위 2 개의 파일을 넣는다.
2 items selected (8.9 MB)

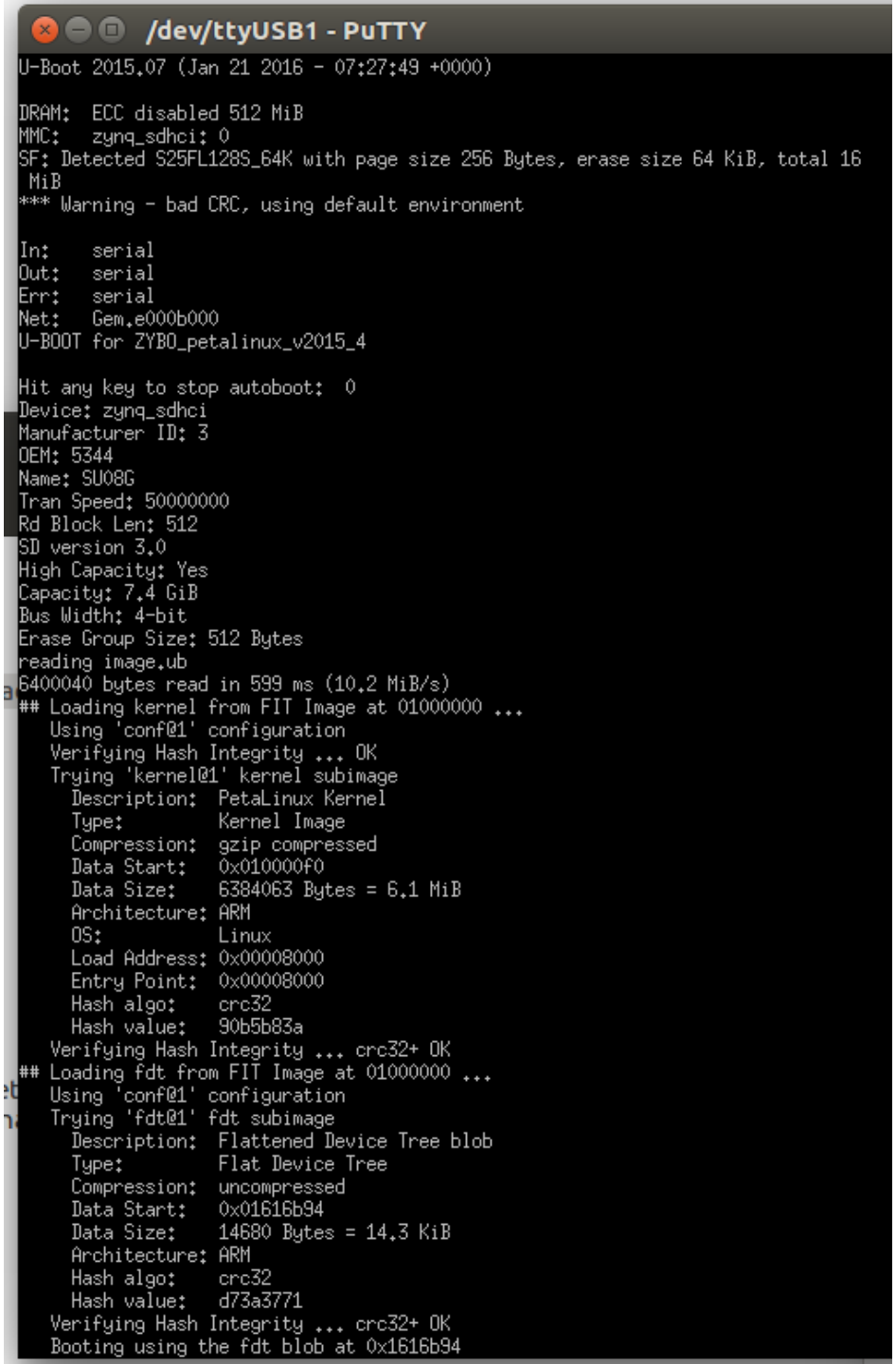

SD MICRO
J8
J2
HDMI I/O
IC21
QC.OK
6
DIGILENT®
www.digilentinc.com
ZYBO™
VGA
JP4
JP6
PLL
JTAG
SD
QSPI
JTAG
J12
3V3
GND
TCK
TDO
TDI
TMS
LD7
ACT
LINK
LD6
IC19
ZYNQ
LD11
PGOOD
LD10
DONE
HPH OUT
BTN7
BTN6
PS-SRST
PROGB
MIC IN
XILINX


HDMI I/O
ETH
LD7
ACT
LINK
LD6
DIGILENT
www.digilentinc.com
ZYBO
TM
VGA
QC.OK
6
JP4
JP6
PLL
JTAG
SD
QSPI
JTAG
J12
3V3
GND
TCK
TDO
TDI
TMS
IC21
IC19
ZYNQ
XC7Z010
CLG400ACX1613
XILINX
LD11
PGOOD
LD10
DONE
BTN7
BTN6
PS-SRST
PROGB
HPH OUT
MIC IN
LINE IN
XADC
XILINX


SD MICRO
J2
J8
HDMI I/O
VGA
JP4
JP6
PLL
JTAG
DIGILENT
www.digilentinc.com
ZYBO
LD7
ACT
LINK
LD6
ETH
LD11
PG000
R119
R116
C131
IC19
C117
IC21


QC OK
6
SD MICRO
HDMI I/O
VGA
DIGILENT
www.digilentinc.com
ZYBO
ETH
LD7
ACT
LINK
LD6
HPH OUT
MIC IN
LINE IN
WALL USB BAT
LD9 LD8
TX RX
LD4
MIO7
MIO51
MIO50
3V3
GND
ANALOG DEVICES
XILINX
BTN2
BTN3
PROG
PS-SRST


sdr@sdr-Samsung-DeskTop-System: ~
sdr@sdr-Samsung-DeskTop-System:~$ dmesg | grep ttyUSB
[10135.631335] usb 3-7: FTDI USB Serial Device converter now attached to ttyUSB0
[10135.631508] usb 3-7: FTDI USB Serial Device converter now attached to ttyUSB1
sdr@sdr-Samsung-DeskTop-System:~$ sudo chmod 666 /dev/ttyUSB1
[sudo] password for sdr:
sdr@sdr-Samsung-DeskTop-System:~$ putty
/dev/ttyUSB1 - PuTTY
ls
Password:
Login incorrect
ZYBO_petalinux_v2015_4 login:
L
Built with PetaLinux v2015.4 (Yocto 1.8) ZYBO_petalinux_v2015_4 /dev/ttyPS0
ZYBO_petalinux_v2015_4 login: root
Password:
login[873]: root login on 'ttyPS0'
root@ZYBO_petalinux_v2015_4:~# ls
root@ZYBO_petalinux_v2015_4:~# ls /
bin dev home lib mnt run sys usr
boot etc init media proc sbin tmp var
root@ZYBO_petalinux_v2015_4:~#


/dev/ttyUSB1 - PuTTY
U-Boot 2015.07 (Jan 21 2016 - 07:27:49 +0000)
DRAM: ECC disabled 512 MiB
MMC: zynq_sdhci: 0
SF: Detected S25FL128S_64K with page size 256 Bytes, erase size 64 KiB, total 16 MiB
*** Warning - bad CRC, using default environment
In: serial
Out: serial
Err: serial
Net: Gem.e000b000
U-BOOT for ZYBO_petalinux_v2015_4
Hit any key to stop autoboot: 0
Device: zynq_sdhci
Manufacturer ID: 3
OEM: 5344
Name: SU08G
Tran Speed: 50000000
Rd Block Len: 512
SD version 3.0
High Capacity: Yes
Capacity: 7.4 GiB
Bus Width: 4-bit
Erase Group Size: 512 Bytes
reading image.ub
6400040 bytes read in 599 ms (10.2 MiB/s)
Loading kernel from FIT Image at 01000000 ...
   Using 'conf@1' configuration
   Verifying Hash Integrity ... OK
   Trying 'kernel@1' kernel subimage
     Description: PetaLinux Kernel
     Type: Kernel Image
     Compression: gzip compressed
     Data Start: 0x010000f0
     Data Size: 6384063 Bytes = 6.1 MiB
     Architecture: ARM
     OS: Linux
     Load Address: 0x00008000
     Entry Point: 0x00008000
     Hash algo: crc32
     Hash value: 90b5b83a
   Verifying Hash Integrity ... crc32+ OK
Loading fdt from FIT Image at 01000000 ...
   Using 'conf@1' configuration
   Trying 'fdt@1' fdt subimage
     Description: Flattened Device Tree blob
     Type: Flat Device Tree
     Compression: uncompressed
     Data Start: 0x01616b94
     Data Size: 14680 Bytes = 14.3 KiB
     Architecture: ARM
     Hash algo: crc32
     Hash value: d73a3771
   Verifying Hash Integrity ... crc32+ OK
   Booting using the fdt blob at 0x1616b94

```
   Uncompressing Kernel Image ... OK
   Loading Device Tree to 07ff9000, end 07fff957 ... OK

Starting kernel ...

Booting Linux on physical CPU 0x0
Linux version 4.0.0-xilinx (petalinux@ubuntu) (gcc version 4.9.2 (Sourcery CodeB
ench Lite 2015.05-17) ) #2 SMP PREEMPT Thu Jan 21 07:28:18 UTC 2016
CPU: ARMv7 Processor [413fc090] revision 0 (ARMv7), cr=18c5387d
CPU: PIPT / VIPT nonaliasing data cache, VIPT aliasing instruction cache
Machine model: ZYBO_petalinux_v2015_4
bootconsole [earlycon0] enabled
cma: Reserved 16 MiB at 0x1f000000
Memory policy: Data cache writealloc
PERCPU: Embedded 11 pages/cpu @debce000 s12672 r8192 d24192 u45056
Built 1 zonelists in Zone order, mobility grouping on.  Total pages: 130048
Kernel command line: console=ttyPS0,115200 earlyprintk
PID hash table entries: 2048 (order: 1, 8192 bytes)
Dentry cache hash table entries: 65536 (order: 6, 262144 bytes)
Inode-cache hash table entries: 32768 (order: 5, 131072 bytes)
Memory: 493248K/524288K available (4759K kernel code, 224K rwdata, 1708K rodata,
 3028K init, 208K bss, 14656K reserved, 16384K cma-reserved, 0K highmem)
Virtual kernel memory layout:
    vector  : 0xffff0000 - 0xffff1000   (   4 kB)
    fixmap  : 0xffc00000 - 0xfff00000   (3072 kB)
    vmalloc : 0xe0800000 - 0xff000000   ( 488 MB)
    lowmem  : 0xc0000000 - 0xe0000000   ( 512 MB)
    pkmap   : 0xbfe00000 - 0xc0000000   (   2 MB)
    modules : 0xbf000000 - 0xbfe00000   (  14 MB)
      .text : 0xc0008000 - 0xc0658efc   (6468 kB)
      .init : 0xc0659000 - 0xc094e000   (3028 kB)
      .data : 0xc094e000 - 0xc0986020   ( 225 kB)
       .bss : 0xc0986020 - 0xc09ba1b4   ( 209 kB)
Preemptible hierarchical RCU implementation.
       Additional per-CPU info printed with stalls.
       RCU restricting CPUs from NR_CPUS=4 to nr_cpu_ids=2.
RCU: Adjusting geometry for rcu_fanout_leaf=16, nr_cpu_ids=2
NR_IRQS:16 nr_irqs:16 16
L2C: platform modifies aux control register: 0x72360000 -> 0x72760000
L2C: DT/platform modifies aux control register: 0x72360000 -> 0x72760000
L2C-310 erratum 769419 enabled
L2C-310 enabling early BRESP for Cortex-A9
L2C-310 full line of zeros enabled for Cortex-A9
L2C-310 ID prefetch enabled, offset 1 lines
L2C-310 dynamic clock gating enabled, standby mode enabled
L2C-310 cache controller enabled, 8 ways, 512 kB
L2C-310: CACHE_ID 0x410000c8, AUX_CTRL 0x76760001
slcr mapped to e0804000
zynq_clock_init: clkc starts at e0804100
Zynq clock init
sched_clock: 64 bits at 325MHz, resolution 3ns, wraps every 3383112499200ns
timer #0 at e0808000, irq=17
Console: colour dummy device 80x30
Calibrating delay loop... 1292.69 BogoMIPS (lpj=6463488)
pid_max: default: 32768 minimum: 301
Mount-cache hash table entries: 1024 (order: 0, 4096 bytes)
Mountpoint-cache hash table entries: 1024 (order: 0, 4096 bytes)
```

```
CPU: Testing write buffer coherency: ok
CPU0: thread -1, cpu 0, socket 0, mpidr 80000000
Setting up static identity map for 0x481788 - 0x4817e0
CPU1: thread -1, cpu 1, socket 0, mpidr 80000001
Brought up 2 CPUs
SMP: Total of 2 processors activated (2591.94 BogoMIPS).
CPU: All CPU(s) started in SVC mode.
devtmpfs: initialized
VFP support v0.3: implementor 41 architecture 3 part 30 variant 9 rev 4
pinctrl core: initialized pinctrl subsystem
NET: Registered protocol family 16
DMA: preallocated 256 KiB pool for atomic coherent allocations
cpuidle: using governor ladder
cpuidle: using governor menu
hw-breakpoint: found 5 (+1 reserved) breakpoint and 1 watchpoint registers.
hw-breakpoint: maximum watchpoint size is 4 bytes.
zynq-ocm f800c000.ocmc: ZYNQ OCM pool: 256 KiB @ 0xe0880000
GPIO IRQ not connected
XGpio: /amba_pl/gpio@41210000: registered, base is 902
GPIO IRQ not connected
XGpio: /amba_pl/gpio@41220000: registered, base is 898
GPIO IRQ not connected
XGpio: /amba_pl/gpio@41200000: registered, base is 894
vgaarb: loaded
SCSI subsystem initialized
usbcore: registered new interface driver usbfs
usbcore: registered new interface driver hub
usbcore: registered new device driver usb
media: Linux media interface: v0.10
Linux video capture interface: v2.00
pps_core: LinuxPPS API ver. 1 registered
pps_core: Software ver. 5.3.6 - Copyright 2005-2007 Rodolfo Giometti <giometti@l
inux.it>
PTP clock support registered
EDAC MC: Ver: 3.0.0
Advanced Linux Sound Architecture Driver Initialized.
Switched to clocksource arm_global_timer
NET: Registered protocol family 2
TCP established hash table entries: 4096 (order: 2, 16384 bytes)
TCP bind hash table entries: 4096 (order: 3, 32768 bytes)
TCP: Hash tables configured (established 4096 bind 4096)
TCP: reno registered
UDP hash table entries: 256 (order: 1, 8192 bytes)
UDP-Lite hash table entries: 256 (order: 1, 8192 bytes)
NET: Registered protocol family 1
RPC: Registered named UNIX socket transport module.
RPC: Registered udp transport module.
RPC: Registered tcp transport module.
RPC: Registered tcp NFSv4.1 backchannel transport module.
hw perfevents: enabled with armv7_cortex_a9 PMU driver, 7 counters available
futex hash table entries: 512 (order: 3, 32768 bytes)
jffs2: version 2.2. (NAND) (SUMMARY)  © 2001-2006 Red Hat, Inc.
io scheduler noop registered
io scheduler deadline registered
io scheduler cfq registered (default)
zynq-pinctrl 700.pinctrl: zynq pinctrl initialized
dma-pl330 f8003000.dmac: Loaded driver for PL330 DMAC-241330
```

```
dma-pl330 f8003000.dmac:        DBUFF-128x8bytes Num_Chans-8 Num_Peri-4 Num_Even
ts-16
e0001000.serial: ttyPS0 at MMIO 0xe0001000 (irq = 143, base_baud = 6250000) is a
 xuartps
console [ttyPS0] enabled
console [ttyPS0] enabled
bootconsole [earlycon0] disabled
bootconsole [earlycon0] disabled
xdevcfg f8007000.devcfg: ioremap 0xf8007000 to e081a000
[drm] Initialized drm 1.1.0 20060810
brd: module loaded
loop: module loaded
CAN device driver interface
libphy: MACB_mii_bus: probed
mdio_bus e000b000.etherne: /amba/ethernet@e000b000/mdio has invalid PHY address
mdio_bus e000b000.etherne: scan phy mdio at address 0
mdio_bus e000b000.etherne: scan phy mdio at address 1
mdio_bus e000b000.etherne: scan phy mdio at address 2
mdio_bus e000b000.etherne: scan phy mdio at address 3
mdio_bus e000b000.etherne: scan phy mdio at address 4
mdio_bus e000b000.etherne: scan phy mdio at address 5
mdio_bus e000b000.etherne: scan phy mdio at address 6
mdio_bus e000b000.etherne: scan phy mdio at address 7
mdio_bus e000b000.etherne: scan phy mdio at address 8
mdio_bus e000b000.etherne: scan phy mdio at address 9
mdio_bus e000b000.etherne: scan phy mdio at address 10
mdio_bus e000b000.etherne: scan phy mdio at address 11
mdio_bus e000b000.etherne: scan phy mdio at address 12
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mdio_bus e000b000.etherne: scan phy mdio at address 22
mdio_bus e000b000.etherne: scan phy mdio at address 23
mdio_bus e000b000.etherne: scan phy mdio at address 24
mdio_bus e000b000.etherne: scan phy mdio at address 25
mdio_bus e000b000.etherne: scan phy mdio at address 26
mdio_bus e000b000.etherne: scan phy mdio at address 27
mdio_bus e000b000.etherne: scan phy mdio at address 28
mdio_bus e000b000.etherne: scan phy mdio at address 29
mdio_bus e000b000.etherne: scan phy mdio at address 30
mdio_bus e000b000.etherne: scan phy mdio at address 31
macb e000b000.ethernet eth0: Cadence GEM rev 0x00020118 at 0xe000b000 irq 145 (0
0:0a:35:00:1e:53)
macb e000b000.ethernet eth0: attached PHY driver [Generic PHY] (mii_bus:phy_addr
=e000b000.etherne:00, irq=-1)
e1000e: Intel(R) PRO/1000 Network Driver - 2.3.2-k
e1000e: Copyright(c) 1999 - 2014 Intel Corporation.
ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
ehci-pci: EHCI PCI platform driver
usbcore: registered new interface driver usb-storage
mousedev: PS/2 mouse device common for all mice
```

```
mdio_bus e000b000.etherne: scan phy mdio at address 28
mdio_bus e000b000.etherne: scan phy mdio at address 29
mdio_bus e000b000.etherne: scan phy mdio at address 30
mdio_bus e000b000.etherne: scan phy mdio at address 31
macb e000b000.ethernet eth0: Cadence GEM rev 0x00020118 at 0xe000b000 irq 145 (0
0:0a:35:00:1e:53)
macb e000b000.ethernet eth0: attached PHY driver [Generic PHY] (mii_bus:phy_addr
=e000b000.etherne:00, irq=-1)
e1000e: Intel(R) PRO/1000 Network Driver - 2.3.2-k
e1000e: Copyright(c) 1999 - 2014 Intel Corporation.
ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
ehci-pci: EHCI PCI platform driver
usbcore: registered new interface driver usb-storage
mousedev: PS/2 mouse device common for all mice
i2c /dev entries driver
Xilinx Zynq CpuIdle Driver started
Driver 'mmcblk' needs updating - please use bus_type methods
sdhci: Secure Digital Host Controller Interface driver
sdhci: Copyright(c) Pierre Ossman
sdhci-pltfm: SDHCI platform and OF driver helper
sdhci-arasan e0100000.sdhci: No vmmc regulator found
sdhci-arasan e0100000.sdhci: No vqmmc regulator found
mmc0: SDHCI controller on e0100000.sdhci [e0100000.sdhci] using ADMA
ledtrig-cpu: registered to indicate activity on CPUs
usbcore: registered new interface driver usbhid
usbhid: USB HID core driver
TCP: cubic registered
NET: Registered protocol family 17
can: controller area network core (rev 20120528 abi 9)
NET: Registered protocol family 29
can: raw protocol (rev 20120528)
can: broadcast manager protocol (rev 20120528 t)
can: netlink gateway (rev 20130117) max_hops=1
Registering SWP/SWPB emulation handler
/opt/pkg/petalinux-v2015.4-final/components/linux-kernel/xlnx-4.0/drivers/rtc/hc
tosys.c: unable to open rtc device (rtc0)
ALSA device list:
mmc0: new high speed SDHC card at address e624
mmcblk0: mmc0:e624 SU08G 7.40 GiB
 mmcblk0: p1 p2
  No soundcards found.
Freeing unused kernel memory: 3028K (c0659000 - c094e000)
INIT: version 2.88 booting
FAT-fs (mmcblk0p1): Volume was not properly unmounted. Some data may be corrupt.
 Please run fsck.
EXT4-fs (mmcblk0p2): recovery complete
EXT4-fs (mmcblk0p2): mounted filesystem with ordered data mode. Opts: (null)
Creating /dev/flash/* device nodes
random: dd urandom read with 2 bits of entropy available
Starting internet superserver: inetd.
update-rc.d: /etc/init.d/run-postinsts exists during rc.d purge (continuing)
 Removing any system startup links for run-postinsts ...
INIT: Entering runlevel: 5
Configuring network interfaces... done.

Built with PetaLinux v2015.4 (Yocto 1.8) ZYBO_petalinux_v2015_4 /dev/ttyPS0
ZYBO petalinux v2015_4 login:
```