

扩展TF卡分区

需要在调试串口操作或在开发板上以root用户操作。

1. 在 parted 中查看分区:

```
powershell
root@elf2-desktop:~# parted /dev/mmcblk1
GNU Parted 3.4
Using /dev/mmcblk1
Welcome to GNU Parted! Type 'help' to view a list of commands.

(parted) print // 查看分区
Model: SD SD64G (sd/mmc)
Disk /dev/mmcblk1: 63.9GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:

Number  Start   End     Size    File system  Name      Flags
  1      8389kB  12.6MB  4194kB                uboot
  2      12.6MB  16.8MB  4194kB                misc
  3      16.8MB  83.9MB  67.1MB                boot
  4      83.9MB  218MB   134MB                recovery
  5      218MB   252MB   33.6MB                backup
  6      252MB   15.3GB  15.0GB  ext4            rootfs
  7      15.3GB  15.4GB  134MB   ext4            oem
  8      15.4GB  63.9GB  48.4GB  ext4            userdata
```

2. 删除分区 7 和 8:

```
powershell
(parted) rm 8
Warning: Partition /dev/mmcblk1p8 is being used. Are you sure you want to continue?
Yes/No? yes
Error: Partition(s) 8 on /dev/mmcblk1 have been written, but we have been unable to inform the kernel of the change, probably because it/they are in use. As a result, the old partition(s) will remain in use. You should reboot now before making further changes.
Ignore/Cancel? ignore
(parted) rm 7
Warning: Partition /dev/mmcblk1p7 is being used. Are you sure you want to continue?
Yes/No? yes
```

```
Error: Partition(s) 7, 8 on /dev/mmcblk1 have been written, but we have been unable to inform the kernel of the change, probably because it/they are in use. As a result, the old partition(s) will remain in use. You should reboot now before making further changes.
Ignore/Cancel? ignore
```

3. 扩展分区 6 :

```
powershell
(parted) resizepart 6
Warning: Partition /dev/mmcblk1p6 is being used. Are you sure you want to continue?
Yes/No? yes
End? [15.3GB]? 100%
Error: Error informing the kernel about modifications to partition /dev/mmcblk1p6 -- Device or resource busy. This means Linux won't know about any changes you made to /dev/mmcblk1p6 until you reboot -- so you shouldn't mount it or use it in any way before rebooting.
Ignore/Cancel? ignore
Error: Partition(s) 7, 8 on /dev/mmcblk1 have been written, but we have been unable to inform the kernel of the change, probably because it/they are in use. As a result, the old partition(s) will remain in use. You should reboot now before making further changes.
Ignore/Cancel? ignore
```

再次查看分区:

```
powershell
(parted) print
Model: SD SD64G (sd/mmc)
Disk /dev/mmcblk1: 63.9GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:

Number  Start   End     Size    File system  Name      Flags
  1      8389kB  12.6MB  4194kB                uboot
  2      12.6MB  16.8MB  4194kB                misc
  3      16.8MB  83.9MB  67.1MB                boot
  4      83.9MB  218MB   134MB                recovery
  5      218MB   252MB   33.6MB                backup
  6      252MB   63.9GB  63.6GB  ext4           rootfs
```

可看到分区6已扩容, ctrl+d 退出 parted。

4. 修改 /etc/fstab :

```
powershell
root@elf2-buildroot:~# vi /etc/fstab
屏蔽掉
/dev/mmcb1k0p7          /oem                    ext4                    defaults
0                      0
/dev/mmcb1k0p8          /userdata                ext4                    defaults
0                      0

Linux 则屏蔽掉:
PARTLABEL=oem    /oem    ext4    defaults    0 2
PARTLABEL=userdata    /userdata    ext4    defaults    0 2
```

注意: 若在Ubuntu中未屏蔽上述两条就重启, 则会导致无法启动。此时可以使用Linux启动, 然后读取TF启动卡中内容, 从而操作Ubuntu文件系统:

```
powershell
root@elf2-buildroot:~# cd /media/sdcard2/etc/ // 或 /mnt/sdcard/etc/
root@elf2-buildroot:/media/sdcard2/etc# vi fstab
屏蔽掉
/dev/mmcb1k0p7          /oem                    ext4                    defaults
0                      0
/dev/mmcb1k0p8          /userdata                ext4                    defaults
0                      0
root@elf2-buildroot:/media/sdcard2/etc# sync
```

5. 保存并重启

6. 扩展分区 6 :

```
powershell
root@elf2-desktop:~# resize2fs /dev/mmcb1k1p6
resize2fs 1.46.5 (30-Dec-2021)
Filesystem at /dev/mmcb1k1p6 is mounted on /run/media/mmcb1k1p6; on-line resizing required
old_desc_blocks = 2, new_desc_blocks = 8
The filesystem on /dev/mmcb1k1p6 is now 15530491 (4k) blocks long.
```

查看分区:

```
powershell
root@elf2-desktop:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root       59G   5.8G   50G  11% /
tmpfs           1.9G     0   1.9G   0% /dev/shm
```

| | | | | | |
|-------|------|------|------|----|----------------|
| tmpfs | 768M | 2.6M | 766M | 1% | /run |
| tmpfs | 5.0M | 4.0K | 5.0M | 1% | /run/lock |
| tmpfs | 1.9G | 12K | 1.9G | 1% | /tmp |
| tmpfs | 384M | 84K | 384M | 1% | /run/user/1000 |
| tmpfs | 384M | 56K | 384M | 1% | /run/user/0 |