

How to maximise storage space with btrfs (on postmarketOS)

by Felix Urbasik „Fell“

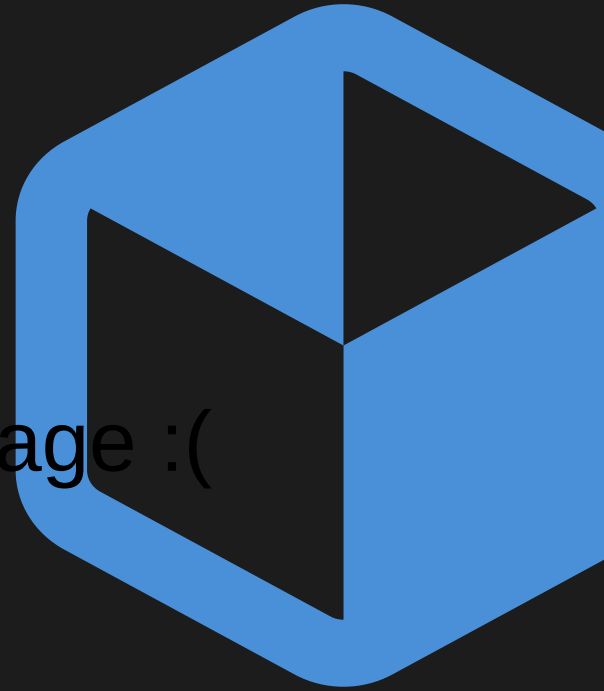
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Slides: https://fellr.net/pmos_btrfs.pdf

My tablet only has 16 GB storage :(




Flatpak

My tablet only has ~~16 GB~~ storage :(

11.2 GB
userdata

Flatp



How it's done
(probably requires lk2nd)

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Step 1: Create split system images

```
pmbootstrap install --split --filesystem btrfs
```

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Step 2: Export images

```
pmbootstrap export  
cd /tmp/postmarketOS-export
```


Step 3: Resize boot partition

```
e2fsck -f samsung-gt510-boot.img  
resize2fs samsung-gt510-boot.img 200000  
truncate samsung-gt510-boot.img -s 204800000  
e2fsck -f samsung-gt510-boot.img
```

Step 4: Flashing

```
heimdall flash --BOOT lk2nd-msm8916.img  
fastboot flash cache samsung-gt510-boot.img  
fastboot flash userdata samsung-gt510-root.img
```

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Step 5: Reboot and enjoy!

```
btrfs device add /dev/mmcblk0p25 /
```

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Step 6: Reboot again and ... 

„postmarketOS debug shell:“

Step 5½: Fix boot


```
$EDITOR /usr/share/initramfs/init_functions.sh
```

```
# after modprobe
```

```
+if [ "$type" = "btrfs" ]; then  
+    btrfs device scan  
+fi
```

```
# before mount
```

```
mkinitfs
```



Tip: Save more space with deduplication
(optional)

B.E.E.S. = „Best-Effort Extent-Same“

<https://github.com/Zygo/bees>



this was my first talk, ever

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