

BTRFS Maintenance scripts

Defragment

From [BTRFS fragmentation can hurt the performance of your System](#)

Find the most fragmented files on your System:

```
find / -xdev -type f | xargs filefrag 2>/dev/null | sed 's/^\(.*\):'
\([0-9]\+\) extent.*/\2 \1/' | awk -F ' ' '$1 > 500' | sort -n -r | head -30
```

You should review this list. If there is something with 10000+ extends, it is a candidate to be flagged as nodatacow. In my case, I have discovered that the fail2ban sqlite database was using 170k extends which is a lot!

```
find / -xdev -type f | xargs filefrag 2>/dev/null | sed 's/^\(.*\):'
\([0-9]\+\) extent.*/\2 \1/' | awk -F ' ' '$1 > 500' | cut -f ' ' -f2
2>/dev/null | xargs -r btrfs -v fi defrag -f -czstd
```

Headline

[/usr/local/bin/btrfsQuota.sh](#)

```
#!/bin/bash
[[ ! -d $1 ]] && { echo Please pass mountpoint as first argument >&2 ;
exit 1 ; }

while read x i x g x x l x p
do
    volName[i]=$p
done <<(btrfs subvolume list $1)

while read g r e
do
    [[ -z $name ]] && echo -e "subvol\tqgroup\ttotal\tunshared"
    group=${g##*/}
    [[ ! -z ${volName[group]} ]] && name=${volName[group]} ||
name='(unknown)'
    echo $name $g `numfmt --to=iec $r` `numfmt --to=iec $e`
done <<(btrfs qgroup show --raw $1 | tail -n+3) | column -t
```

remove dangling QGroups

To solve After deleting a subvolume, you must manually delete the associated qgroup. mentioned here: https://btrfs.wiki.kernel.org/index.php/Quota_support#Known_issues

[/usr/local/bin/btrfsQGroupClean.sh](#)

```
#!/bin/bash

[[ ! -d $1 ]] && { echo Please pass mountpoint as first argument >&2 ;
exit 1 ; }

while read x i x g x x l x p
do
    volName[i]=$p
done < <(btrfs subvolume list $1)

while read g r e
do
    group=${g##*/}
    [[ -z ${volName[group]} ]] && [[ $r -eq 0 ]] && [[ $e -eq 0 ]] &&
echo $g $r $e && btrfs qgroup destroy $g $1
    #name=${volName[group]} || name='(unknown)'
    #echo $name $g `numfmt --to=iec $r` `numfmt --to=iec $e`
done < <(btrfs qgroup show --raw $1 | tail -n+3) | column -t
```

[crontab](#)

```
@daily /usr/local/bin/btrfsQGroupClean.sh
```

periodic scrub

From arch linux btrfs-progs

[/etc/systemd/system/btrfs-scrub@.service](#)

```
[Unit]
Description=Btrfs scrub on %f

[Service]
Nice=19
IOSchedulingClass=idle
ExecStart=/bin/btrfs scrub start -B %f
```

[/etc/systemd/system/btrfs-scrub@.timer](#)

```
[Unit]
Description=Monthly Btrfs scrub on %f

[Timer]
OnCalendar=monthly
AccuracySec=1d
Persistent=true

[Install]
WantedBy=multi-user.target
```

```
systemctl daemon-reload
systemctl enable btrfs-scrub@-.timer
systemctl start btrfs-scrub@-.timer # to enable for /

systemctl enable btrfs-scrub@home.timer # to enable for /home
systemctl start btrfs-scrub@home.timer # to enable for /home
```

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