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Changaco / btrfs-undelete

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btrfs-undelete

🔗 btrfs-undelete

```
1  #!/bin/bash
2  # btrfs-undelete
3  # Copyright (C) 2013 Jörg Walter <info@syntax-k.de>
4  # This program is free software; you can redistribute it and/or modify it under
5  # the term of the GNU General Public License as published by the Free Software
6  # Foundation; either version 2 of the License, or any later version.
7
8  if [ ! -b "$1" -o -z "$2" -o -z "$3" ]; then
9      echo "Usage: $0 <dev> <file/dir> <dest>" 1>&2
10     echo
11     echo "This program tries to recover the most recent version of the"
12     echo "given file or directory (recursively)"
13     echo
14     echo "<dev> must not be mounted, otherwise this program may appear"
15     echo "to work but find nothing."
16     echo
17     echo "<file/dir> must be specified relative to the filesystem root,"
18     echo "obviously. It may contain * and ? as wildcards, but in that"
19     echo "case, empty files might be 'recovered'. If <file/dir> is a"
20     echo "single file name, this program tries to recover the most"
21     echo "recent non-empty version of the file."
22     echo
23     echo "<dest> must be a writable directory with enough free space"
24     echo "to hold the files you're trying to restore."
25     exit 1
26 fi
27 dev="$1"
28 file="$2"
29
30 file="${file#/}"
31 file="${file%*/}"
32 regex="${file//\//\\/}"
33
34 # quote regex special characters
35 regex="${regex//./\\.}"
```

```

36 regex="${regex//+/\+}"
37 regex="${regex//|/\|}"
38 regex="${regex//(/\(/}"
39 regex="${regex//)/\)}"
40 regex="${regex//\[/\[}"
41 regex="${regex//]/\]}"
42 regex="${regex//\{\/\{"}"
43 regex="${regex//\}\/\}"
44
45 # treat shell wildcards specially
46 regex="${regex//\*/.*}"
47 regex="${regex//\?/\.}"
48
49 # extract number of slashes in order to get correct number of closing parens
50 slashes="${regex//[^\]/}]"
51
52 # build final regex
53 regex="^/(|${regex//\/(|/}{(|/.*${slashes//?/})})\)$"
54
55 roots="$(mktemp --tmpdir btrfs-undelete.roots.XXXXX)"
56 out="$(mktemp --tmpdir="$3" -d btrfs-undelete.XXXXX)"
57 cd $out
58
59 trap "rm $roots" EXIT
60 trap "rm -r $out &> /dev/null; exit 1" SIGINT
61
62 echo -ne "Searching roots..."
63 btrfs-find-root -a "$dev" 2>&1 \
64     | grep ^Well \
65     | sed -r -e 's/Well block ([0-9]+).*\/1/' \
66     | sort -rn >$roots || exit 1
67 echo
68
69 i=0
70 max="$(wc -l <$roots)"
71
72 while read id; do
73     ((i+=1))
74     echo -e "Trying root $id... ($i/$max)"
75     btrfs restore -t $id --path-regex "$regex" "$dev" . &>/dev/null
76     if [ "$?" = 0 ]; then
77         found=$(find . -type f ! -size 0c | wc -l)
78         if [ $found -gt 0 ]; then
79             echo "Recovered $found non-empty file(s) into $out"
80             exit 0
81         fi
82         find . -type f -size 0c -exec echo "Found {} but it's empty" \; -delete
83     fi
84 done <$roots
85 rm -r $out
86 echo "Didn't find '$file'"
87 exit 1

```

breznak commented on Sep 16, 2016

👍 saved my day (and ass/data) today! :) Do you plan to turn it into a small repo or package it, so it doesnt get lost?

breznak commented on Sep 16, 2016

Q1: does it recover only delete, or all files in given directory?

Q2: is there a possibility to speed the script up (quit early safely)? It recovered most of my files on (16/173) and now I'm just sitting here..is it safe to kill the process early?

Thanks!

Jipok commented on Nov 13, 2017

Thank you! It saved me! For some reason, the file began to occupy 0 bytes. This script is the only thing that helped to restore.

ghost commented on Jan 10, 2018

doesn't seem to work.

Omicraft commented on Mar 6, 2018

This script totally **saved** my movie collection folder!

fjf2002 commented on Apr 2, 2018

You are sorting byte-addresses descending instead of generation ids descending, aren't you?

MerloRodrigo commented on Sep 30, 2018

Wow! perfect. It's was a beatful work. Thanks a lot

Payden-Pringle commented on Dec 28, 2018

This script is successfully creating files that appear to be the correct size, but they cannot be opened or read correctly with the relevant programs. Not sure what could be wrong here, as the script seems to be working?

splurben commented on Apr 26, 2019

This worked perfectly, better than I ever could have expected, for me. The files I was recovering had only been deleted about 2 minutes before I used the script and I was able to unmount the drive 10 seconds after I accidentally deleted (rm -r) the files.

minhng99 commented on Oct 13, 2019

Perfect!

jamalroger commented on Mar 1, 2020

I try to restore my file but i got this errors

recover.sh: 32: Bad substitution

command

```
sudo sh recover.sh /dev/sda /home/jamal/project/work_payments/* /home/jamal/restore/
```

cpbotha commented on Mar 18, 2020

Thank you very much for this script! Did something silly with dvc remove on a directory containing some files that were not committed yet, and your script was able to recover the files.

StarterX4 commented on Apr 21, 2020 • edited ▼

```
[root@doadgrz starterx4]# /home/starterx4/Pulpit/btrfs-undelete.sh /dev/sdb3 * /mnt/xir/~Btrfs/un/  
mktemp: failed to create directory via template 'akt2.png/btrfs-undelete.XXXXX': Not a directory  
Searching roots...  
Trying root 53695479808... (1/33)  
Recovered 24085 non-empty file(s) into  
[root@doadgrz starterx4]#
```

And then the destination directory is empty. What's happening?

StarterX4 commented on Apr 21, 2020 • edited ▼

Ah ok, there must be `"/" instead of ""`.

Although, i tried to restore files manually, but my filesystem must be really messed up.

```
[root@doadgrz tmp]# btrfs restore -t 7303168 /dev/sdb3 /mnt/xir/~Btrfs/un/
parent transid verify failed on 7303168 wanted 99464 found 91953
parent transid verify failed on 7303168 wanted 99464 found 91953
Ignoring transid failure
WARNING: could not setup extent tree, skipping it
Couldn't setup device tree
Could not open root, trying backup super
parent transid verify failed on 7303168 wanted 99464 found 91953
parent transid verify failed on 7303168 wanted 99464 found 91953
Ignoring transid failure
WARNING: could not setup extent tree, skipping it
Couldn't setup device tree
Could not open root, trying backup super
parent transid verify failed on 7303168 wanted 99464 found 91953
parent transid verify failed on 7303168 wanted 99464 found 91953
Ignoring transid failure
WARNING: could not setup extent tree, skipping it
Couldn't setup device tree
Could not open root, trying backup super
[root@doadgrz tmp]#
```

janos666 commented on Oct 12, 2020

find-root now needs the -a option to list more than one roots

kiptanoi commented on Dec 14, 2020

Can anyone tell me how to use this?
Do I need to download something? Where to put the downloaded stuff?
And if I want to have back deleted files from this folder: "**Dokument**"
That have this info:
Location: "/media/jonas/0e362876:data"
Filesystem: "btrfs"
Mounted on: "/media/jonas/0e362876:data"
Mounted from: "/dev/md127"

And I want to save data collected by this code here:
Name: "nas_tmp"
Location: "/media/jonas/M.2 - Recover"
Mounted on: "/media/jonas/M.2 - Recover"
Mounted from: "/dev/nvmeOn1p6"

How can I the use this "btrfs-undelete" with my info?

endolith commented on Jan 19, 2021 • edited ▼

Can you write some examples with different <file/dir> formats? wildcards, etc? No matter what format I enter, it says "Didn't find ..."

endolith commented on Jan 19, 2021 • edited ▾

OH IT NEEDS TO BE RUN AS ROOT using `sudo .` Then it says

```
...
Trying root 14769717477376... (192/213)
Trying root 14769717379072... (193/213)
Trying root 14769716805632... (194/213)
Trying root 14769716510720... (195/213)
...
```

But still doesn't find anything, even with a very broad search like `sudo ./btrfs-undelete /dev/sdc "/Foldername/*" ~/restore` which is a folder that definitely still exists on that volume...

Edit: Nevermind it somehow re-mounted itself, so it wasn't working even though it looked like it was. The above command does work! Yayyyy

mgutt commented on Jan 23, 2021

Does this script really work unattended? Because I executed the restore command manually and I needed to confirm a "looping a lot" question:

```
btrfs restore -i /dev/nvme1n1p1 /mnt/disk2/nvme1n1p1_restore
No valid Btrfs found on /dev/nvme1n1p1
Could not open root, trying backup super
We seem to be looping a lot on /mnt/disk2/nvme1n1p1_restore/domains/Win10/vdisk1.img, do you want to
keep going on ? (y/N/a)
```

I was not able to find a flag which allowed unattended execution?!

illwieckz commented on Jan 24, 2021 • edited ▾

@**mgutt**, the `restore` command you did is not exactly the same as the one used in the script, anyway if you want to avoid answering `y` indefinitely you can do that:

```
yes | btrfs restore -i /dev/nvme1n1p1 /mnt/disk2/nvme1n1p1_restore
```

mgutt commented on Jan 24, 2021

I know. Its only a hint. Maybe the same can happen for the `btrfs-undelete` script, so it become stuck?!

Regarding your piping idea. I think "a" for "all" would be better. But does it return "a" + "enter", which is needed? (I can't test it anymore)

PS

I hit "N" because the file was not important for me. Anyhow, it was restored ^^

illwieckz commented on Jan 24, 2021 • edited ▾

To always answer a you can do:

```
yes a | btrfs restore -i /dev/nvme1n1p1 /mnt/disk2/nvme1n1p1_restore
```

Anyhow, it was restored ^^

Maybe it's incomplete?

Fr-Dae commented on Mar 9, 2021 • edited ▾

(Lubuntu 18.04x64)

hello, I would like to have some precision on your script

To execute it, I have to copy and paste it into a text editor

saved it under the .sh extension and make it executable right?

and

I have rescement I deleted by mistake a very important folder on my secondary hard drive (/ dev / sda3) an HDD

The file contained only zip that I want to receive

```
/dev/sda3 = /mnt/38b05da3-7068-45b9-bc0a-0b944f15487f
```

A friend recommended me the following monate options to make the disk read alone thus avoiding the old data, for limiting the loss.

```
nosuid,nodev,nofail,x-gvfs-show,noatime,nodiratime,ro
```

that right for you ?

I plugged in an external hard drive, because my systeme ssd are prety small

```
/dev/sdc1 = /media/dae-rog/data-backup
```

My question is, are your tools like?

Where is it asking for data once executed?

Or do I manually be edited?

Dae#5125 on discord

Fogapod commented on Apr 11, 2021

Thank you

alvarlagerlof commented on Nov 9, 2021

Thank you so much! This saved me 12 days.

idreamerhx commented on Dec 21, 2021

amazing works! saved my monthes!