Unable to see UUID/label using blkid and lsblk commands

Solution Verified - Updated October 13 2017 at 11:26 AM - English ()

Environment

- Red Hat Enterprise Linux 7

Issue

- Unable to see UUID/label using `blkid` and `lsblk --fs`
- Command shows no output. For example, `/dev/sdd` is known to contain a filesystem, but when using the `blkid` or `lsblk --fs` commands as shown or when passing the device name to the `blkid` command, no output is given for the device.

```
[root@localhost ~]# blkid
/dev/sda1: UUID="1d388f9d-13c5-46c5-8596-3dddaa5311fd" TYPE="xfs"
/dev/sda2: UUID="Mb2UbN-431B-L4qv-bES3-zPPr-YX11-1HLhvc" TYPE="LVM2_member"
/dev/sdb: UUID="201c080c-2916-42f1-8e35-0e62fb43a692" TYPE="xfs"
/dev/mapper/rhel-swap: UUID="253c0a80-8653-4b9d-8ba1-8802a971796b" TYPE="swap"
/dev/sde: UUID="2836381a-4894-42c8-9d1d-0d6cea8fe1f7" TYPE="xfs"
/dev/mapper/rhel-root: UUID="c716fc3e-d977-452f-9507-21a2181b0304" TYPE="xfs"

[root@localhost ~]# blkid /dev/sdd
[root@localhost ~]#

[root@localhost ~]# lsblk --fs /dev/sdd
NAME FSTYPE LABEL UUID MOUNTPOINT
sdd
```

Resolution

If ambivalent results (multiple filesystem magic numbers or superblocks) are found for a particular device by the `blkid` or `lsblk --fs` commands, nothing will be reported for that device. Remove all extra filesystem superblock markers and magic numbers using the `wipefs` tool.

Root Cause

- Ambivalent results currently are not producing the correct return code. The following bug has been opened to attempt to correct the issue, and provide a more descriptive failure rather than a silent one.
  - Bug 1501953 - blkid shows wrong return code on failure with ambivalent results (https://bugzilla.redhat.com/show_bug.cgi?id=1501953)

Diagnostic Steps

- Having duplicate filesystem labels or magic numbers on a device causes the `blkid` or `lsblk --fs` commands to display no output. Further information can be gathered by probing the device with the `blkid -p` command.

```
[root@localhost ~]# blkid -p /dev/sdd
/dev/sdd: ambivalent result (probably more filesystems on the device, use wipefs(8) to see more details)
```

- Following the instructions to use the `wipefs` command we see that there are two filesystems present on the disk. In this case, one magic number located at the front of the disk and the other (ZFS) located at the end of the device.

```
[root@localhost ~]# wipefs /dev/sdd
offset               type
----------------------------------------------------------------
0x3ffa9000           zfs_member   [filesystem]

0x0                  xfs   [filesystem]
                     LABEL: fs43
                     UUID:  08b51be7-10d9-4e69-b78c-ba4fd55ad01a
```

- By removing the ZFS label, the `blkid` and `lsblk --fs` commands are able to report the XFS UUID and label again.

```
[root@localhost ~]# wipefs -o 0x3ffa9000 /dev/sdd
/dev/sdd: 8 bytes were erased at offset 0x3ffa9000 (zfs_member): 0c b1 ba 00 00 00 00 00

[root@localhost ~]# blkid /dev/sdd
/dev/sdd: LABEL="fs43" UUID="08b51be7-10d9-4e69-b78c-ba4fd55ad01a" TYPE="xfs"

[root@localhost ~]# lsblk --fs /dev/sdd
NAME FSTYPE LABEL UUID                                 MOUNTPOINT
sdd  xfs    fs43  08b51be7-10d9-4e69-b78c-ba4fd55ad01a
```

In some cases, it may be neccessary to run wipefs more than once to remove all extra superblock markers from the disk. For example, in this case, 7 ZFS labels were removed in order to make the XFS details visible again.

Product(s) **Red Hat Enterprise Linux (/taxonomy/products/red-hat-enterprise-linux)** **Component** **util-linux (/components/util-linux)**

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