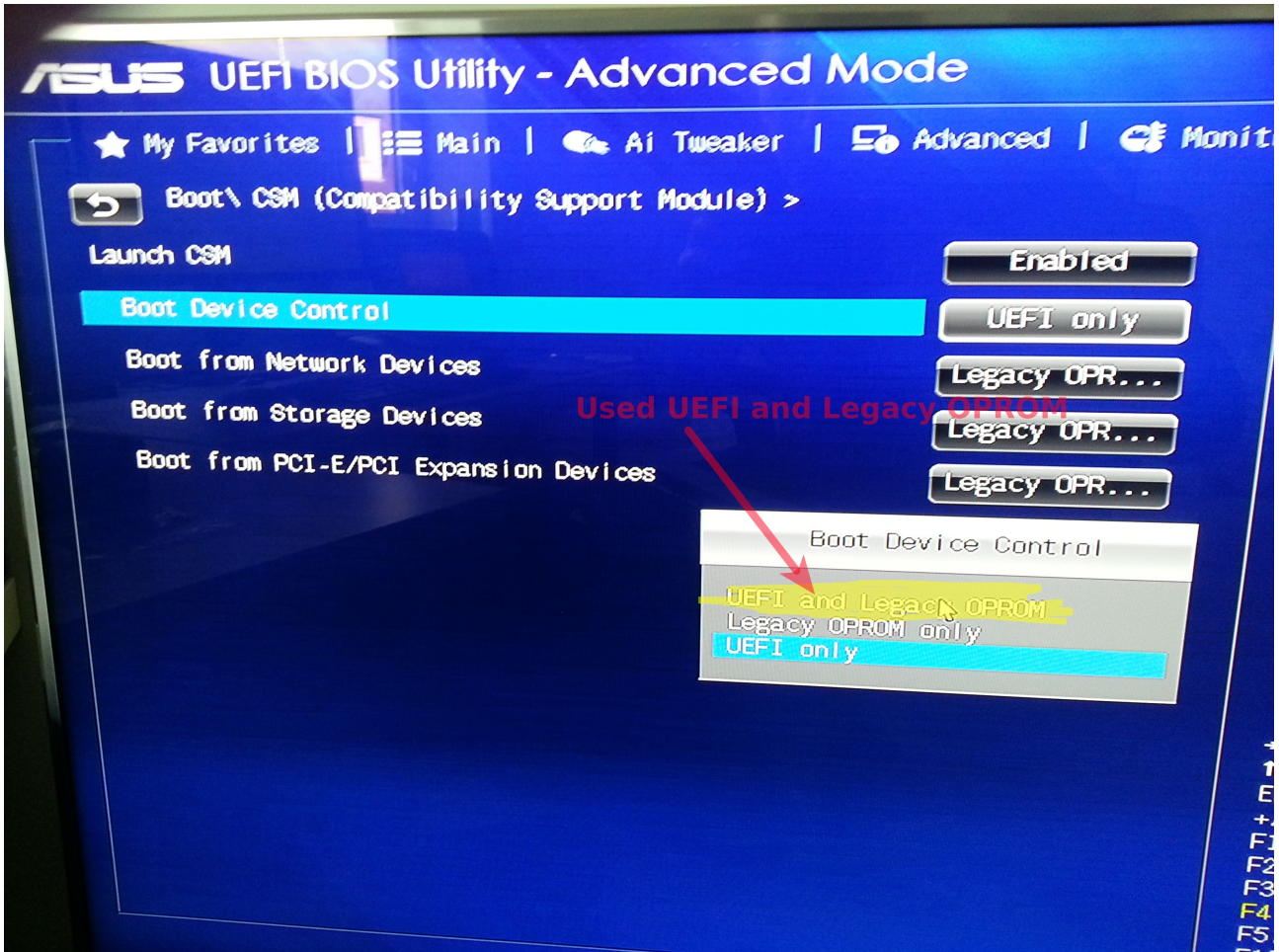


Bug #1286047 - Ubuntu 13.10 not booting on hardware RAID

Subsequently encountered Ubuntu 13.10 startup problem.

First Scenario

1. The CSM option is set to “UEFI and Legacy OPROM”



2. Install Ubuntu 13.10 successfully by using the UEFI option

3. After the first reboot, Ubuntu 13.10 starts successfully but shows the message

“dm-0: WRITE SAME failed. Manually zeroing”

during the startup.

```
※ Starting Send an event to indicate plymouth is up
※ Starting startpar bridge for notification of upstar
※ Stopping startpar bridge for notification of upstar
※ Stopping Send an event to indicate plymouth is up
※ Starting startpar bridge for notification of upstar
※ Stopping startpar bridge for notification of upstar
※ Starting configure virtual network devices
※ Starting startpar bridge for notification of upstar
※ Stopping startpar bridge for notification of upstar
※ Stopping userspace bootsplash
※ Starting startpar bridge for notification of upstar
※ Stopping startpar bridge for notification of upstar
[ 9.174828] dm-0: WRITE SAME failed. Manually zeroi
```

4. After the second reboot (although in some cases it took a couple of reboots), the following error was displayed.

“ALERT! /dev/mapper/TRHYP001—vg-root does not exist. Dropping to a shell”

After a couple of minutes it then printed the following on screen.

“aacraid: probe of 0000:01:00.0 failed with error -512”

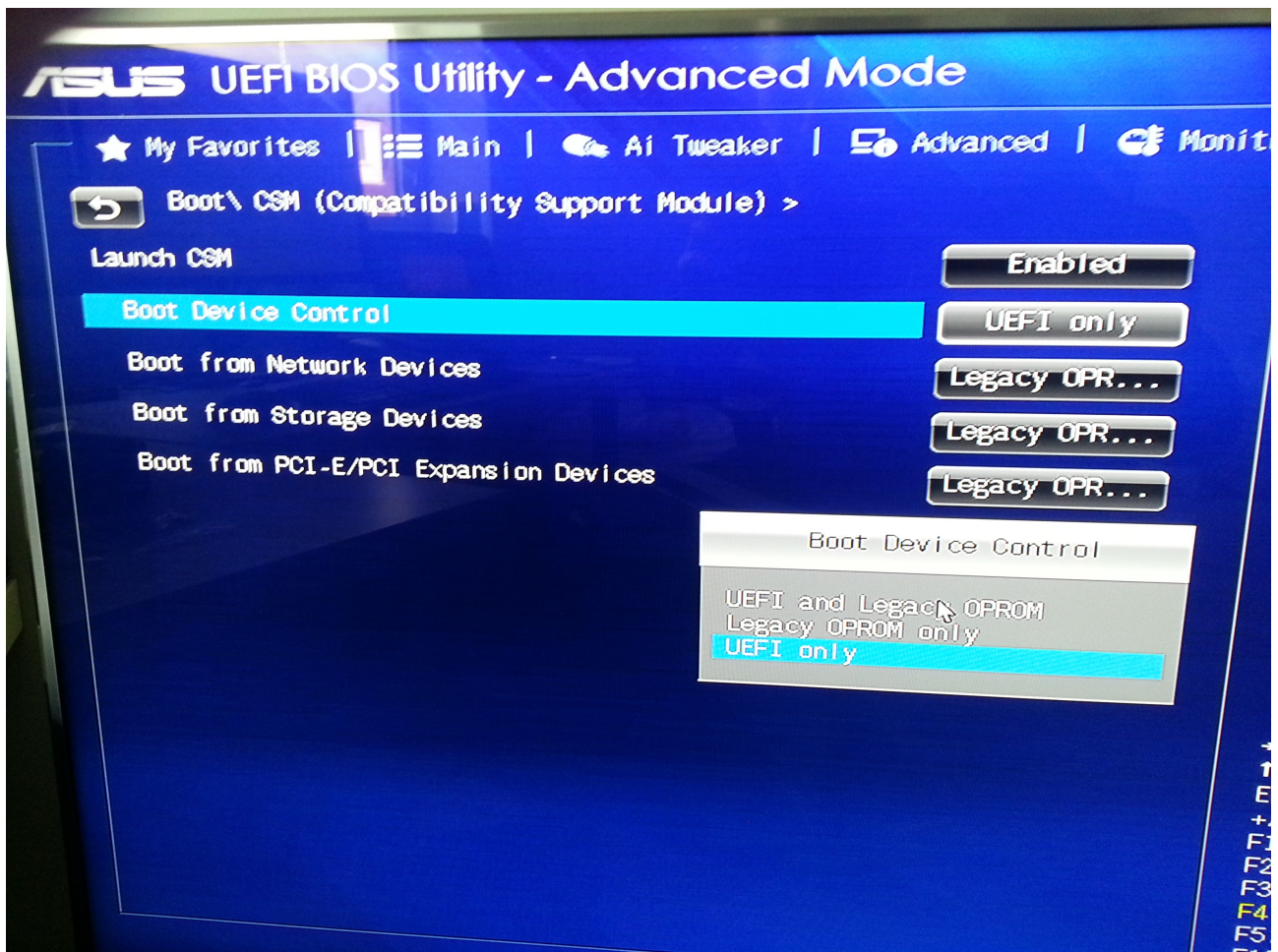
```
0000:00:14.0-2.3/117...:0
1.657834] usb 3-... : new full-speed USB device number 4 us
1.680250] usb 3-... : New USB device found, idVendor=046d, i
1.680951] usb 3-... : New USB device strings: Mfr=1, Product
1.681646] usb 3-... : Product: Logitech BT Mini-Receiver
1.682289] usb 3-2.3: Manufacturer: Logitech
1.682914] usb 3-2.3: SerialNumber: 000761E172C1
1.694336] input: Logitech Logitech BT Mini-Receiver as /devi
t3
[ 1.696063] logitech 0003:046D:C714.0002: input,hiddev0,hidraw
usb-0000:00:14.0-2.3/input0
[ 2.405751] Switched to clocksource sc
Gave up waiting for root device. Common problems:
- Boot args (cat /proc/cmdline)
- Check rootdelay= (did the system wait long enough?)
- Check root= (did the system wait for the right device?)
- Missing modules (cat /proc/modules; ls /dev)
ALERT! /dev/mapper/TRHYP001--vg-root does not exist. Dropping to
BusyBox v1.20.2 (Ubuntu 1:1.20.0-8.1ubuntu1) built-in shell (ash)
Enter 'help' for a list of built-in commands.
(initramps) [ 300.490961] AAC0: kernel 5.2-0[19109]
[ 300.491651] AAC0: monitor 5.2-0[19109]
[ 300.492253] AAC0: bios 5.2-0[19109]
[ 300.492909] AAC0: serial 337565
[ 300.493542] AAC0: Non-DASD support enabled.
[ 300.494171] AAC0: 64bit support enabled.
[ 300.494800] AAC0: 64 Bit DAC enabled
[ 302.391429] aacraid: probe of 0000:01:00.0 failed with error -512
```

5. Powered Off the machine and booted again but it ended up with the same error. No other TTY or SSH access was possible. I tried to restart the machine a couple of times but always ended up this screen.

Basically, the error is non-recoverable.

Second Scenario

1. The CSM option is set to “UEFI only”



2. Install Ubuntu 13.10 successfully by using the UEFI option
3. After the first reboot, Ubuntu 13.10 starts successfully but shows the message

“dm-0: WRITE SAME failed. Manually zeroing”

during the startup.

4. After the second reboot (although in some cases it took a couple of reboots), the following error was displayed.

“ALERT! /dev/mapper/TRHYP001—vg-root does not exist. Dropping to a shell”

```
[ 1.676156] usb 3-2.3: new full-speed USB device found
[ 1.676845] usb 3-2.3: New USB device found, idVendor=046d, idProduct=c714, bcdDevice=0002, iProduct=Logitech, iManufacturer=Logitech, iSerialNumber=00076
[ 1.677511] usb 3-2.3: New USB device string descriptor: Logitech
[ 1.678149] usb 3-2.3: Product: Logitech
[ 1.678772] usb 3-2.3: Manufacturer: Logitech
[ 1.689878] input: Logitech Logitech BT Mouse
t3
[ 1.691524] logitech 0003:046D:C714.0002: input0
usb-0000:00:14.0-2.3/input0
[ 2.405757] Switched to clocksource tsc
Gave up waiting for root device. Common problems:
- Boot args (cat /proc/cmdline)
- Check rootdelay= (did the system wait long enough?)
- Check root= (did the system wait for the right device?)
- Missing modules (cat /proc/modules; ls /dev)
ALERT! /dev/mapper/TRHYP001--vg-root does not exist

BusyBox v1.20.2 (Ubuntu 1:1.20.0-8.1ubuntu1) built-in shell (ash)
Enter 'help' for a list of built-in commands.

(initramps) _
```

5. Powered Off the machine and booted again. In **contrast** to the first scenario this reboot then caused to open Grub without the automatic countdown. After having selected the default “Ubuntu” option by pressing enter, Ubuntu started correctly.

Basically, the error is recoverable by rebooting.

Another interesting finding

While writing this document, I restarted the machine dozens of times but somehow **did not encounter** the

“dm-0: WRITE SAME failed. Manually zeroing”

and neither the

“ALERT! /dev/mapper/TRHYP001—vg-root does not exist. Dropping to a shell”

any more.

I can only presume that the reboot triggered some sort of repair?

BootInfoScript on working Ubuntu 13.10

Furthermore I run the "bootinfoscript" again, while having Ubuntu 13.10 correctly working on the machine. The second "bootinfoscript-output2" file is attached below. **There I see that the report does not state that any boot loader is installed!?**

Is that a red herring?

Boot Info Script 0.61 [1 April 2012]

=====
===== Boot Info Summary:
=====

=> No boot loader is installed in the MBR of /dev/sda.

sda1: _____

File system: vfat
Boot sector type: FAT32
Boot sector info: According to the info in the boot sector, sda1 starts
at sector 0. But according to the info from fdisk,
sda1 starts at sector 2048.
Operating System:
Boot files:

sda2: _____

File system: ext2
Boot sector type: -
Boot sector info:
Operating System:
Boot files: /grub/grub.cfg

sda3: _____

File system: LVM2_member
Boot sector type: -
Boot sector info:

TRHYP001-vg-root': _____

File system:
Boot sector type: Unknown
Boot sector info:
Mounting failed: mount: unknown filesystem type "

TRHYP001-vg-swap_1': _____

File system:
Boot sector type: Unknown
Boot sector info:
Mounting failed: mount: unknown filesystem type "
mount: unknown filesystem type "

===== Drive/Partition Info:
=====

Drive: sda _____

Disk /dev/sda: 3994.3 GB, 3994319585280 bytes
255 heads, 63 sectors/track, 485615 cylinders, total 7801405440 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes

Partition	Boot	Start Sector	End Sector	# of Sectors	Id System
/dev/sda1		1 4,294,967,295	4,294,967,295	ee	GPT

GUID Partition Table detected.

Partition	Start Sector	End Sector	# of Sectors	System
/dev/sda1	2,048	999,423	997,376	EFI System partition
/dev/sda2	999,424	1,499,135	499,712	Data partition (Linux)
/dev/sda3	1,499,136	4,580,177,919	4,578,678,784	Logical Volume Manager (LVM) partition (Linux)

"blkid" output: _____

Device	UUID	TYPE	LABEL
/dev/mapper/TRHYP001--vg-root	e0a12428-bcaf-4df0-9606-60164e9daf0a	ext4	
/dev/mapper/TRHYP001--vg-swap_1	1965f17a-049d-47db-b99e-a7bf37a65681	swap	
/dev/sda1	E1F7-B59A	vfat	
/dev/sda2	b60db8a7-3937-455f-9c83-e7f60c36e409	ext2	
/dev/sda3	v0XvyE-uvw3-TsaG-ZI1V-l3KN-btC2-1YlZey	LVM2_member	

===== "ls -R /dev/mapper/" output: =====

/dev/mapper:
control
TRHYP001--vg-root
TRHYP001--vg-swap_1

===== Mount points:
=====

Device	Mount_Point	Type	Options
/dev/mapper/TRHYP001--vg-root /		ext4	(rw,errors=remount-ro)

```
/dev/sda1    /boot/efi      vfat    (rw)
/dev/sda2    /boot          ext2    (rw)
```

```
===== sda2/grub/grub.cfg:
=====
```

```
-----
#
# DO NOT EDIT THIS FILE
#
# It is automatically generated by grub-mkconfig using templates
# from /etc/grub.d and settings from /etc/default/grub
#

### BEGIN /etc/grub.d/00_header ###
if [ -s $prefix/grubenv ]; then
  set have_grubenv=true
  load_env
fi
set default="0"

if [ x"${feature_menuentry_id}" = xy ]; then
  menuentry_id_option="--id"
else
  menuentry_id_option=""
fi

export menuentry_id_option

if [ "${prev_saved_entry}" ]; then
  set saved_entry="${prev_saved_entry}"
  save_env saved_entry
  set prev_saved_entry=
  save_env prev_saved_entry
  set boot_once=true
fi

function savedefault {
  if [ -z "${boot_once}" ]; then
    saved_entry="${chosen}"
    save_env saved_entry
  fi
}

function recordfail {
  set recordfail=1
  if [ -n "${have_grubenv}" ]; then if [ -z "${boot_once}" ]; then save_env recordfail; fi; fi
}

function load_video {
  if [ x$feature_all_video_module = xy ]; then
```



```

    insmod all_video
else
    insmod efi_gop
    insmod efi_uga
    insmod ieee1275_fb
    insmod vbe
    insmod vga
    insmod video_bochs
    insmod video_cirrus
fi
}

if [ x$feature_default_font_path = xy ]; then
    font=unicode
else
    insmod part_gpt
    insmod lvm
    insmod ext2
    set root='lvm/TRHYP001--vg-root'
    if [ x$feature_platform_search_hint = xy ]; then
        search --no-floppy --fs-uuid --set=root --hint='lvm/TRHYP001--vg-root'
e0a12428-bcaf-4df0-9606-60164e9daf0a
    else
        search --no-floppy --fs-uuid --set=root e0a12428-bcaf-4df0-9606-60164e9daf0a
    fi
    font="/usr/share/grub/unicode.pf2"
fi

if loadfont $font ; then
    set gfxmode=auto
    load_video
    insmod gfxterm
    set locale_dir=$prefix/locale
    set lang=en_GB
    insmod gettext
fi
terminal_output gfxterm
if [ "${recordfail}" = 1 ]; then
    set timeout=-1
else
    set timeout=2
fi
### END /etc/grub.d/00_header ###

### BEGIN /etc/grub.d/05_debian_theme ###
set menu_color_normal=white/black
set menu_color_highlight=black/light-gray
### END /etc/grub.d/05_debian_theme ###

### BEGIN /etc/grub.d/10_linux ###
function gfxmode {
    set gfxpayload="${1}"

```

```

        if [ "${1}" = "keep" ]; then
            set vt_handoff=vt.handoff=7
        else
            set vt_handoff=
        fi
    }
if [ "${recordfail}" != 1 ]; then
    if [ -e ${prefix}/gfxblacklist.txt ]; then
        if hwmatch ${prefix}/gfxblacklist.txt 3; then
            if [ ${match} = 0 ]; then
                set linux_gfx_mode=keep
            else
                set linux_gfx_mode=text
            fi
        else
            set linux_gfx_mode=text
        fi
    else
        set linux_gfx_mode=keep
    fi
else
    set linux_gfx_mode=text
fi
export linux_gfx_mode
menuentry 'Ubuntu' --class ubuntu --class gnu-linux --class gnu --class os $menuentry_id_option
'gnulinux-simple-e0a12428-bcaf-4df0-9606-60164e9daf0a' {
recordfail
    load_video
    gfxmode $linux_gfx_mode
    insmod gzio
    insmod part_gpt
    insmod ext2
    set root='hd0,gpt2'
    if [ x${feature_platform_search_hint} = xy ]; then
        search --no-floppy --fs-uuid --set=root --hint-bios=hd0,gpt2 --hint-efi=hd0,gpt2
--hint-baremetal=ahci0,gpt2 b60db8a7-3937-455f-9c83-e7f60c36e409
    else
        search --no-floppy --fs-uuid --set=root b60db8a7-3937-455f-9c83-e7f60c36e409
    fi
    linux /vmlinuz-3.11.0-12-generic.efi.signed root=/dev/mapper/TRHYP001--vg-root ro
    initrd /initrd.img-3.11.0-12-generic
}
submenu 'Advanced options for Ubuntu' $menuentry_id_option
'gnulinux-advanced-e0a12428-bcaf-4df0-9606-60164e9daf0a' {
    menuentry 'Ubuntu, with Linux 3.11.0-12-generic' --class ubuntu --class gnu-linux --class
gnu --class os $menuentry_id_option
'gnulinux-3.11.0-12-generic-advanced-e0a12428-bcaf-4df0-9606-60164e9daf0a' {
    recordfail
        load_video
        gfxmode $linux_gfx_mode
        insmod gzio
        insmod part_gpt

```

```

        insmod ext2
        set root='hd0,gpt2'
        if [ x$feature_platform_search_hint = xy ]; then
            search --no-floppy --fs-uuid --set=root --hint-bios=hd0,gpt2 --hint-efi=hd0,gpt2
--hint-baremetal=ahci0,gpt2 b60db8a7-3937-455f-9c83-e7f60c36e409
        else
            search --no-floppy --fs-uuid --set=root b60db8a7-3937-455f-9c83-e7f60c36e409
        fi
        echo 'Loading Linux 3.11.0-12-generic ...'
        linux /vmlinuz-3.11.0-12-generic.efi.signed root=/dev/mapper/TRHYP001--vg-root
ro
        echo 'Loading initial ramdisk ...'
        initrd /initrd.img-3.11.0-12-generic
    }
    menuentry 'Ubuntu, with Linux 3.11.0-12-generic (recovery mode)' --class ubuntu --class
gnu-linux --class gnu --class os $menuentry_id_option
'gnulinux-3.11.0-12-generic-recovery-e0a12428-bcaf-4df0-9606-60164e9daf0a' {
    recordfail
        load_video
        insmod gzio
        insmod part_gpt
        insmod ext2
        set root='hd0,gpt2'
        if [ x$feature_platform_search_hint = xy ]; then
            search --no-floppy --fs-uuid --set=root --hint-bios=hd0,gpt2 --hint-efi=hd0,gpt2
--hint-baremetal=ahci0,gpt2 b60db8a7-3937-455f-9c83-e7f60c36e409
        else
            search --no-floppy --fs-uuid --set=root b60db8a7-3937-455f-9c83-e7f60c36e409
        fi
        echo 'Loading Linux 3.11.0-12-generic ...'
        linux /vmlinuz-3.11.0-12-generic.efi.signed root=/dev/mapper/TRHYP001--vg-root
ro recovery nomodeset
        echo 'Loading initial ramdisk ...'
        initrd /initrd.img-3.11.0-12-generic
    }
}

```

```
### END /etc/grub.d/10_linux ###
```

```
### BEGIN /etc/grub.d/20_linux_xen ###
```

```
### END /etc/grub.d/20_linux_xen ###
```

```
### BEGIN /etc/grub.d/20_memtest86+ ###
```

```
### END /etc/grub.d/20_memtest86+ ###
```

```
### BEGIN /etc/grub.d/30_os-prober ###
```

```
### END /etc/grub.d/30_os-prober ###
```

```
### BEGIN /etc/grub.d/30_uefi-firmware ###
```

```
menuentry 'System setup' $menuentry_id_option 'uefi-firmware' {
    fwsetup

```

```
}  
### END /etc/grub.d/30_uefi-firmware ###
```

```
### BEGIN /etc/grub.d/40_custom ###  
# This file provides an easy way to add custom menu entries. Simply type the  
# menu entries you want to add after this comment. Be careful not to change  
# the 'exec tail' line above.  
### END /etc/grub.d/40_custom ###
```

```
### BEGIN /etc/grub.d/41_custom ###  
if [ -f "${config_directory}/custom.cfg ]; then  
  source "${config_directory}/custom.cfg  
elif [ -z "${config_directory}" -a -f $prefix/custom.cfg ]; then  
  source $prefix/custom.cfg;  
fi  
### END /etc/grub.d/41_custom ###
```

```
-----  
===== sda2: Location of files loaded by Grub: =====
```

GiB - GB	File	Fragment(s)
----------	------	-------------

```
===== Unknown MBRs/Boot Sectors/etc:  
=====
```

Unknown BootLoader on TRHYP001-vg-root'

Unknown BootLoader on TRHYP001-vg-swap_1'

```
===== StdErr Messages:  
=====
```

```
cat: /tmp/BootInfo-xoiddRZM/Tmp_Log: No such file or directory  
skip_dev_dir: Couldn't split up device name TRHYP001-vg-root'  
Volume group name TRHYP001-vg-root' has invalid characters  
Skipping volume group TRHYP001-vg-root'  
skip_dev_dir: Couldn't split up device name TRHYP001-vg-root'  
Volume group name TRHYP001-vg-root' has invalid characters  
Skipping volume group TRHYP001-vg-root'  
skip_dev_dir: Couldn't split up device name TRHYP001-vg-root'  
Volume group name TRHYP001-vg-root' has invalid characters  
Skipping volume group TRHYP001-vg-root'  
hexdump: /dev/mapper/TRHYP001-vg-root': No such file or directory  
hexdump: /dev/mapper/TRHYP001-vg-root': No such file or directory  
skip_dev_dir: Couldn't split up device name TRHYP001-vg-swap_1'  
Volume group name TRHYP001-vg-swap_1' has invalid characters  
Skipping volume group TRHYP001-vg-swap_1'  
skip_dev_dir: Couldn't split up device name TRHYP001-vg-swap_1'
```

Volume group name TRHYP001-vg-swap_1' has invalid characters
Skipping volume group TRHYP001-vg-swap_1'
skip_dev_dir: Couldn't split up device name TRHYP001-vg-swap_1'
Volume group name TRHYP001-vg-swap_1' has invalid characters
Skipping volume group TRHYP001-vg-swap_1'
hexdump: /dev/mapper/TRHYP001-vg-swap_1': No such file or directory
hexdump: /dev/mapper/TRHYP001-vg-swap_1': No such file or directory