

## 知 CAS3.0升级到5.0版本由于CVK主机使用LVM模式安装导致启动失败问题

蒋立明 2018-06-21 发表

### 组网及说明

无

### 问题描述

某局点因业务需要，将CAS E0306H06升级版本到E0509。升级完成后，在重启服务器过程中异常，提示“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/cvknode5-root does not exist.Dropping to a shell! ”,长时间卡在这里，无法进入正常的蓝色XSconsole界面。

```
[ 0.077054] [Firmware Bug]: the BIOS has corrupted hw-PMU resources
is 330)
[ 1.383008] Error parsing PCC subspaces from PCCT
Save 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/cvknode5-root does not exist. Dropping to a shell!

BusyBox v1.18.5 (Ubuntu 1:1.18.5-1ubuntu4) built-in shell (ash)
Enter 'help' for a list of built-in commands.

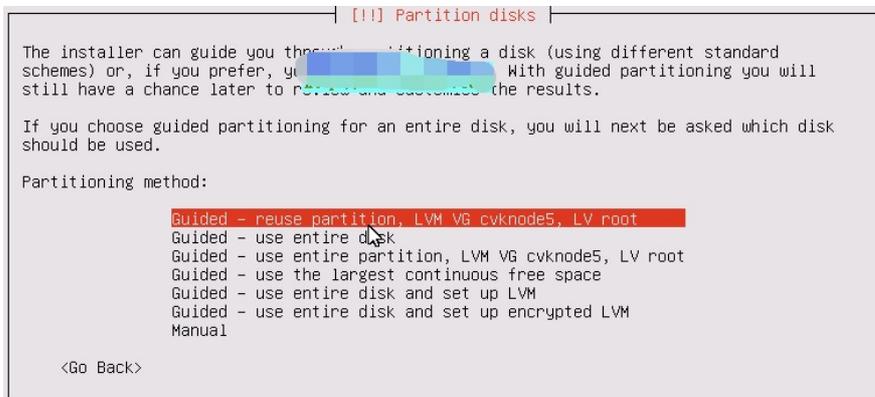
(initramfs)
```

### 过程分析

从告警提示“/dev/mapper/cvknode5-root does not exist”可以确认现场部署CVK主机时是使用LVM模式安装的（非推荐的安装方式）。该模式下在CAS3.0升级到5.0过程中，由于LVM卷的兼容性问题，故导致在升级后无法正确识别到本地硬盘的系统分区。

### 解决方法

步骤1：挂载CAS安装镜像，重启服务器，从ISO光驱引导，进入正常的安装CAS操作流程。选择网卡，输入IP地址、网关、主机名等信息后，进入选择系统分区操作界面。（停留在此界面，不要点任何选项）



步骤2：按键盘“Alt+F2”进入CVK主机后台，执行如下命令步骤。

- 1) vgchange -ay
- 2) blkid查看挂载点信息
- 3) mount /dev/mapper/cvknode5-root /mnt （根据实际情况填写）
- 4) mount /dev/sda2 /mnt/boot (根据实际情况填写，由于Legacy和UEFI模式安装的不同，有可能出现dev/sda1和/dev/sda2两种情况)
- 5) chroot /mnt
- 6) bash
- 7) vi etc/lvm/lvm.conf （编辑lvm配置文件）

```
~ # vgchange -ay
  4 logical volume(s) in volume group "cuknode5" now active
~ # blkid
/dev/mapper/cuknode5-root: UUID="85afc694-b8e2-457f-b56c-63b66e6c42eb" TYPE="ext4"
/dev/mapper/cuknode5-swap_1: UUID="1b0955b4-c7a9-4b5a-9d6e-99d1d7f03020" TYPE="swap"
/dev/mapper/cuknode5-var+log: UUID="38fb0c12-db96-4e80-b1f8-830e3b6bb6c9" TYPE="ext4"
/dev/mapper/cuknode5-ums: UUID="01b89179-e07c-4045-a318-4de0db75f7c1" TYPE="ext4"
/dev/sda2: UUID="fa2d500c-fadc-479e-b5e2-2da1cbf4571f" TYPE="ext2"
/dev/sda3: UUID="0c6iEh-g78Z-5L2k-nC5B-dz1x-otCB-yWm987" TYPE="LVM2_member"
/dev/sr0: LABEL="CAS U3.0 E0306 amd64" TYPE="iso9660"
~ # mount /dev/mapper/cuknode5-root /mnt
~ # mount /dev/sda2 /mnt/boot
~ # chroot /mnt
~ # bash
root@cuknode55:/# vi etc/lvm/lvm.conf
```

步骤3: 修改/etc/lvm/lvm.conf配置文件, 具体修改内容见如下图。

修改前:

```
~ # By default we accept every block device:
filter = [ "r/block/", "r/disk/", "r/sd.*[1-9].*$/", "a./.*/" ]
~ # Exclude the cdrom drive
# filter = [ "r!dev/cdrom!" ]
53,5
```

修改后:

```
~ # By default we accept every block device:
filter = [ "a./.*/" ]
# filter = [ "r/block/", "r/disk/", "r/sd.*[1-9].*$/", "a./.*/" ]
~ # Exclude the cdrom drive
# filter = [ "r!dev/cdrom!" ]
-- INSERT --
54,25
```

步骤4: 执行“update-initramfs -u”命令永久生效配置。

```
root@cuknode55:/# update-initramfs -u
update-initramfs: Generating /boot/initrd.img-4.1.0-generic
root@cuknode55:/#
```

步骤5: 两次exit退出当前路径后, 重启服务器即可恢复正常。

```
update-initramfs: Generating /boot/initrd.img-4.1.0-generic
root@cuknode55:/# exit
exit
~ # exit
~ # reboot
```