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简介

本文描述如何增加大小磁盘在运行—UCS Performance Manager的基础虚拟机(UCSPM) VMware ESXi主机的。

问题

有时，当UCSPM的根分区变得全双工时，系统不正常运行。一个原因是日志文件由应用程序创建变得太大。

解决方案

在您开始前，您必须首先关闭UCSPM虚拟机。然后请连接对与安全壳SSH的ESXi主机CLI并且寻找在数据存储器的vmdk文件。

1. 为了对一个新的指定的长度扩大在当前虚拟机磁盘文件的空间，请输入vmkfstools at命令

```
ESXi主机。 /vmfs/volumes/datastore/ucspm11.cisco.lab # vmkfstools
--extendvirtualdisk 200G ucspm11.cisco.lab.vmdk
Grow: 100% done.
```

2. 用这些命令检查当前文件系统状态： [root@localhost ~]# df -h

```
Filesystem                Size      Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root  78G    3.6G   71G   5% /
tmpfs                      7.8G    56K   7.8G   1% /dev/shm
/dev/sda1                   485M    32M   428M   7% /boot
/dev/mapper/VolGroup-lv_home  22G    314M   20G   2% /home [root@localhost ~]# fdisk -l
/dev/sda
```

```
Disk /dev/sda: 214.7 GB, 214748364800 bytes
255 heads, 63 sectors/track, 26108 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x0007c854
```

```
Device Boot      Start         End      Blocks   Id  System
/dev/sda1  *            1           64       512000    83  Linux
Partition 1 does not end on cylinder boundary.
/dev/sda2            64       13055    104344576    8e  Linux LVM
```

3. 磁盘已经有大容量然而新空间需要分配。创建新的主要的分区。为了执行此任务请输入这五命令：**p** -显示当前分区状态**n** -创建一个新的分区**p** -创建一个主要的分区**3** -分区编号**w** -写入对磁盘的更改 [root@localhost ~]# fdisk /dev/sda

WARNING: DOS-compatible mode is deprecated. It's strongly recommended to switch off the mode (command 'c') and change display units to sectors (command 'u').

Command (m for help): **p**

Disk /dev/sda: 214.7 GB, 214748364800 bytes
255 heads, 63 sectors/track, 26108 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
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Device	Boot	Start	End	Blocks	Id	System
/dev/sda1	*	1	64	512000	83	Linux
Partition 1 does not end on cylinder boundary.						
/dev/sda2		64	13055	104344576	8e	Linux LVM

Command (m for help): **n**

Command action

e extended

p primary partition (1-4)

p

Partition number (1-4): **3**

First cylinder (13055-26108, default 13055):

Using default value 13055

Last cylinder, +cylinders or +size{K,M,G} (13055-26108, default 26108):

Using default value 26108

Command (m for help): **w**

The partition table has been altered!

Calling ioctl() to re-read partition table.

WARNING: Re-reading the partition table failed with error 16:

Device or resource busy.

The kernel still uses the old table. The new table will be used at the next reboot or after you run partprobe(8) or kpartx(8)

Syncing disks.

4. 系统重新启动要求为了应用在分区表上的变化。 [root@localhost ~]# **shutdown -r now**
5. 输入fdisk命令为了验证新的分区顺利地创建。 [root@localhost ~]# **fdisk -l /dev/sda**

Disk /dev/sda: 214.7 GB, 214748364800 bytes
255 heads, 63 sectors/track, 26108 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x0007c854

Device	Boot	Start	End	Blocks	Id	System
/dev/sda1	*	1	64	512000	83	Linux
Partition 1 does not end on cylinder boundary.						
/dev/sda2		64	13055	104344576	8e	Linux LVM
/dev/sda3		13055	26108	104854910	83	Linux

6. 由创建的分区最近扩大当前卷组(VolGroup)。 [root@localhost ~]# **vgextend VolGroup /dev/sda3**

Volume group "VolGroup" successfully extended
vgdisplay命令显示关于卷组、总大小和自由物理范围(PE)单元的详细信息。 [root@localhost ~]# **vgdisplay**

--- Volume group ---

```

VG Name          VolGroup
System ID
Format           lvm2
Metadata Areas  3
Metadata Sequence No  13
VG Access       read/write
VG Status       resizable
MAX LV          0
Cur LV         3
Open LV         3
Max PV          0
Cur PV         3
Act PV          3
VG Size         209.50 GiB
PE Size         4.00 MiB
Total PE        53632
Alloc PE / Size 27833 / 108.72 GiB
Free PE / Size  25799 / 100.78 GiB
VG UUID         TIm130-WNDC-04jC-wA4q-dnbN-hVxp-iZnwzC

```

7. 扩大装载作为根分区的逻辑音量(/dev/mapper/VolGroup-lv_root)。-l参数指定自由物理范围单元的范围。在本例中，分配PE/大小值从前面的命令是25799。请勿忘掉+此处符号您能否则毁坏系统。

```

[root@localhost ~]# lvextend -l +25799 /dev/mapper/VolGroup-lv_root
Extending logical volume lv_root to 179.99 GiB
Logical volume lv_root successfully resized

```

8. 输入这些命令为了验证当前逻辑音量大小和属性卷组的为了发现相关的物理磁盘：

```

[root@localhost ~]# lvdisplay /dev/mapper/VolGroup-lv_root
--- Logical volume ---
LV Path          /dev/VolGroup/lv_root
LV Name          lv_root
VG Name          VolGroup
LV UUID          0cQmLZ-LnBN-5R8B-1LfQ-0F9n-jeIr-S4WGwG
LV Write Access  read/write
LV Creation host, time localhost.localdomain, 2015-03-18 11:39:05 +0000
LV Status        available
# open           1
LV Size          179.99 GiB
Current LE       46078
Segments         4
Allocation       inherit
Read ahead sectors auto
- currently set to 256
Block device     253:0[root@localhost ~]# vgdisplay -v VolGroup
Using volume group(s) on command line
Finding volume group "VolGroup"
--- Volume group ---
VG Name          VolGroup
System ID
Format           lvm2
Metadata Areas  3
Metadata Sequence No  14
VG Access       read/write
VG Status       resizable
MAX LV          0
Cur LV         3
Open LV         3
Max PV          0
Cur PV         3
Act PV          3
VG Size         209.50 GiB
PE Size         4.00 MiB
Total PE        53632
Alloc PE / Size 53632 / 209.50 GiB

```

Free PE / Size 0 / 0
VG UUID TIm130-WNDC-04jC-wA4q-dnbN-hVxp-iZnWzC

--- Logical volume ---

LV Path /dev/VolGroup/lv_root
LV Name lv_root
VG Name VolGroup
LV UUID 0cQmLZ-LnBN-5R8B-1LfQ-0F9n-jeIr-S4WGWg
LV Write Access read/write
LV Creation host, time localhost.localdomain, 2015-03-18 11:39:05 +0000
LV Status available
open 1
LV Size 179.99 GiB
Current LE 46078
Segments 4
Allocation inherit
Read ahead sectors auto
- currently set to 256
Block device 253:0

--- Logical volume ---

LV Path /dev/VolGroup/lv_home
LV Name lv_home
VG Name VolGroup
LV UUID nMhmiO-1f50-htLI-0YBI-Ntfe-JLmt-slzTpJ
LV Write Access read/write
LV Creation host, time localhost.localdomain, 2015-03-18 11:39:12 +0000
LV Status available
open 1
LV Size 21.65 GiB
Current LE 5542
Segments 1
Allocation inherit
Read ahead sectors auto
- currently set to 256
Block device 253:2

--- Logical volume ---

LV Path /dev/VolGroup/lv_swap
LV Name lv_swap
VG Name VolGroup
LV UUID E6UQB1-8eqg-o2rS-zg1k-Op4V-lnmu-HU1jrI
LV Write Access read/write
LV Creation host, time localhost.localdomain, 2015-03-18 11:39:18 +0000
LV Status available
open 1
LV Size 7.86 GiB
Current LE 2012
Segments 1
Allocation inherit
Read ahead sectors auto
- currently set to 256
Block device 253:1

--- Physical volumes ---

PV Name /dev/sda2
PV UUID 3eUCnc-uvaz-1u4R-uumD-dRnY-JPsh-hxPARW
PV Status allocatable
Total PE / Free PE 25474 / 0

PV Name /dev/sdb
PV UUID 2kcp3I-FL9y-dL6n-y1ex-DcDH-Zx1l-Tfxl3z
PV Status allocatable
Total PE / Free PE 2559 / 0

```
PV Name          /dev/sda3
PV UUID          Utzlpq-QnVa-lWfl-V20Z-d5eN-JSiz-btHmZN
PV Status        allocatable
Total PE / Free PE  25599 / 0
```

9. 在逻辑音量增加后，请通过新的逻辑音量大小放大根文件系统。 [root@localhost ~]#

```
resize2fs /dev/mapper/VolGroup-lv_root
```

```
resize2fs 1.41.12 (17-May-2010)
```

```
Filesystem at /dev/mapper/VolGroup-lv_root is mounted on /; on-line resizing required
old desc_blocks = 5, new_desc_blocks = 12
```

```
Performing an on-line resize of /dev/mapper/VolGroup-lv_root to 47183872 (4k) blocks.
```

```
The filesystem on /dev/mapper/VolGroup-lv_root is now 47183872 blocks long.文件系统磁盘空
```

```
间使用情况应该当前显示一个新的延长的大小。 [root@localhost ~]# df -h
```

```
Filesystem                Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root 178G  3.6G  165G   3% /
tmpfs                      7.8G   56K  7.8G   1% /dev/shm
/dev/sda1                  485M   32M  428M   7% /boot
/dev/mapper/VolGroup-lv_home  22G  314M   20G   2% /home
```