

Storcli基本使用手册

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变更记录

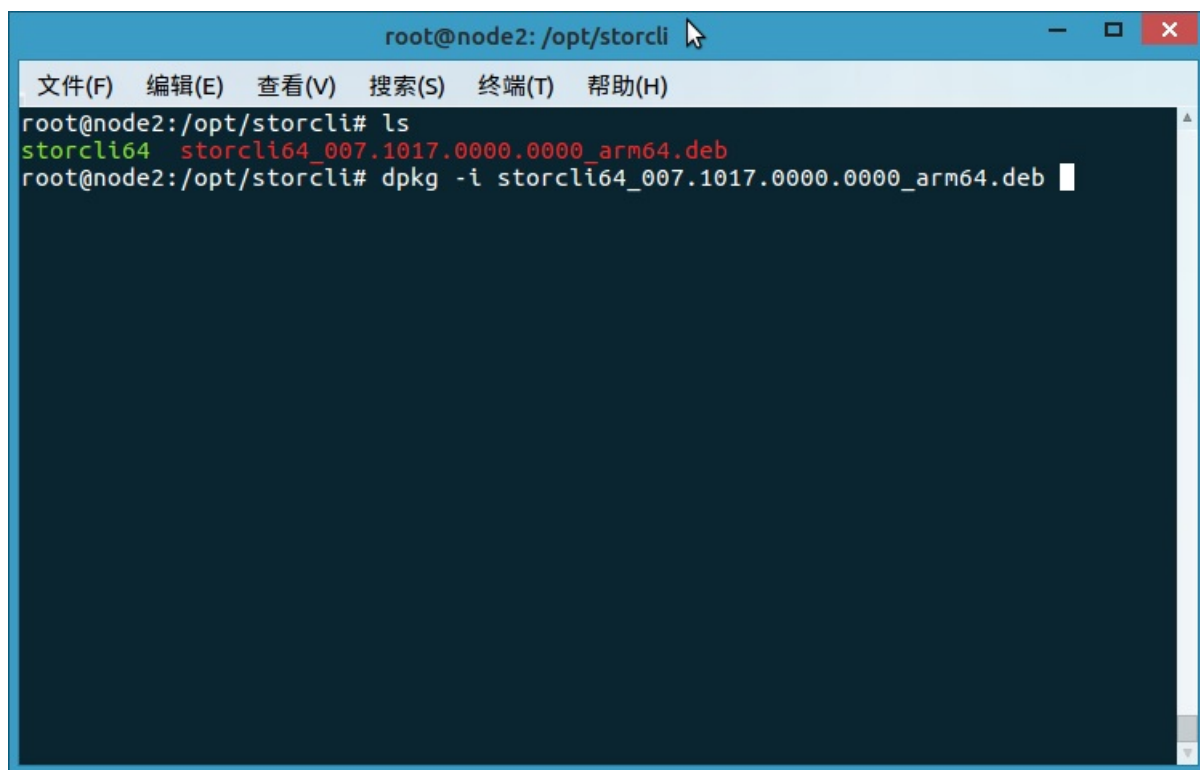
版本	修订时间	修订人	修订类型	修订章节	修订内容
V1.0	2019.11.06	姚然	A	全部	初稿
V1.1	2019.11.07	雷宸	Z	部分	增加部分内容
V1.2	2019.11.1	唐广	Z	部分	增加部分内容
V1.3	2020.7.28	贾永锋	Z	部分	增加部分内容

1介绍

Storcli（Storage Command Line Tool）是LSI公司2013最新开发的RAID卡命令行管理工具。使用该工具可以实现操作系统内完成对RAID卡的全部操作。该工具相比之前的MegaCLI工具，功能更强大，操作更方便。

2使用方法

1.安装软件

A terminal window titled 'root@node2: /opt/storcli' with standard window controls. The menu bar includes '文件(F)', '编辑(E)', '查看(V)', '搜索(S)', '终端(T)', and '帮助(H)'. The terminal content shows the user running 'ls' in the directory '/opt/storcli', which lists 'storcli64' and 'storcli64_007.1017.0000.0000_arm64.deb'. The file 'storcli64' is highlighted in green, and the deb file is in red. The user then runs the command 'dpkg -i storcli64_007.1017.0000.0000_arm64.deb' to install the software.

```
root@node2: /opt/storcli
文件(F)  编辑(E)  查看(V)  搜索(S)  终端(T)  帮助(H)
root@node2:/opt/storcli# ls
storcli64  storcli64_007.1017.0000.0000_arm64.deb
root@node2:/opt/storcli# dpkg -i storcli64_007.1017.0000.0000_arm64.deb
```

2.安装到的目录

/opt/MegaRAID/storcli

3.查看raid信息

```
root@node2: /opt/storcli
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 帮助(H)
root@node2:/opt/storcli# /opt/MegaRAID/storcli/storcli64 /c0 show
```

图示raid上挂了4块盘，记录好盘符（绿色框252: x）后面会用到

```
root@node2: /opt/storcli
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 帮助(H)
PD LIST :
=====
EID:SlT DID State DG          Size Intf Med SED PI SeSz Model          Sp Type
-----
252:0    15 UGood - 837.843 GB SAS HDD N  N  512B AL13SEB900      U  -
252:1    18 UGood - 837.843 GB SAS HDD N  N  512B AL13SEB900      U  -
252:2    17 UGood - 837.843 GB SAS HDD N  N  512B AL13SEB900      U  -
252:3    16 UGood - 837.843 GB SAS HDD N  N  512B AL13SEB900      U  -
-----

EID=Enclosure Device ID|SlT=Slot No.|DID=Device ID|DG=DriveGroup
DHS=Dedicated Hot Spare|UGood=Unconfigured Good|GHS=Global Hotspare
UBad=Unconfigured Bad|Onln=Online|Offln=Offline|Int=Interface
Med=Media Type|SED=Self Encryptive Drive|PI=Protection Info
SeSz=Sector Size|Sp=Spun|U=Up|D=Down|T=Transition|F=Foreign
UGUnsp=Unsupported|UGShld=UnConfigured shielded|HSPShld=Hotspare shielded
CFShld=Configured shielded|Cpybck=CopyBack|CBSHld=Copyback Shielded
UBUnsp=UBad Unsupported

root@node2:/opt/storcli#
```

4.创建raid

通过命令创建raid，示例是创建raid10（raid10至少需要四块盘“drives=”按照步骤3绿色框里内容填写，如252:x），如果使用其他模式，参照“步骤6”“步骤7”

```
root@node2: /opt/storcli
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 标签(B) 帮助(H)
root@node2: /opt/storcli x root@node2: /opt/MegaRAID/storcli x
root@node2:/opt/storcli# /opt/MegaRAID/storcli/storcli64 /c0 add vd r10 size=all
drives=252:0-1 drives=252:2-3
CLI Version = 007.1017.0000.0000 May 10, 2019
Operating system = Linux 4.4.6.S001.64.180811
Controller = 0
Status = Success
Description = Add VD Succeeded.

root@node2:/opt/storcli#
```

5.查看创建结果

1)成功后可以看到系统多了一块/dev/sdb的盘，如下图（使用命令fdisk -l查看）

```
root@node2: /opt/MegaRAID/storcli
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 标签(B) 帮助(H)
root@node2: /opt/storcli x root@node2: /opt/MegaRAID/storcli x
Disk /dev/sda: 223.6 GiB, 240057409536 bytes, 468862128 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x5955d3be

设备      启动      Start      末尾      扇区      Size Id 类型
/dev/sda1    2048    2000895    1998848    976M 83 Linux
/dev/sda2    2000896    65980415    63979520    30.5G 83 Linux
/dev/sda3    65982462    468860927    402878466    192.1G 5 扩展
/dev/sda5    65982464    265979903    199997440    95.4G 83 Linux
/dev/sda6    265981952    285980671    19998720    9.5G 83 Linux
/dev/sda7    285982720    414328831    128346112    61.2G 83 Linux
/dev/sda8    414330880    435654655    21323776    10.2G 83 Linux
/dev/sda9    435656704    467654655    31997952    15.3G 82 Linux 交换 / Solaris
/dev/sda10 * 467656704    468860927    1204224    588M ef EFI (FAT-12/16/32)

Disk /dev/sdb: 1.7 TiB, 1799255752704 bytes, 3514171392 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 262144 bytes / 262144 bytes
root@node2:/opt/MegaRAID/storcli#
```

2)同步步骤4，也可以创建raid0（根据实际情况选择创建raid模式）


```
root@node2: /opt/storcli
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 标签(B) 帮助(H)
root@node2: /opt/storcli x root@node2: /opt/MegaRAID/storcli x
root@node2:/opt/storcli# /opt/MegaRAID/storcli/storcli64 /c0 add vd r0 size=all
drives=252:0-3
CLI Version = 007.1017.0000.0000 May 10, 2019
Operating system = Linux 4.4.6.S001.64.180811
Controller = 0
Status = Success
Description = Add VD Succeeded.

root@node2:/opt/storcli#
```

3)同步步骤4，创建几种raid的命令格式

```
root@node2: /opt/MegaRAID/storcli
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 标签(B) 帮助(H)
root@node2: /opt/storcli x root@node2: /opt/MegaRAID/storcli x
root@node2:/opt/MegaRAID/storcli# ./storcli64 /c0 add help
Storage Command Line Tool Ver 007.1017.0000.0000 May 10, 2019

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storcli /cx add vd r[0|1|5|6|00|10|50|60]
[Size=<VD1_Sz>,<VD2_Sz>,..|all] [name=<VDNAME1>,..]
drives=e:s|e:s-x|e:s-x,y,e:s-x,y,z [PDperArray=x][SED]
[pdcache=on|off|default][pi][DimmerSwitch(ds)=default|automatic(auto)|
none|maximum(max)|MaximumWithoutCaching(maxnocache)][WT|WB|AWB][nora|ra]
[direct|cached] [cachevd] [unmap][Strip=<8|16|32|64|128|256|512|1024>]
[AfterVd=X] [EmulationType=0|1|2] [Spares = [e:]s|[e:]s-x|[e:]s-x,y]
[force][ExclusiveAccess] [Cbsize=0|1|2 Cbmode=0|1|2|3|4|7]
storcli /cx add vd each r0 [name=<VDNAME1>,..] [drives=e:s|e:s-x|e:s-x,y]
[SED] [pdcache=on|off|default][pi] [DimmerSwitch(ds)=default|
automatic(auto)|none|maximum(max)|MaximumWithoutCaching(maxnocache)]
[WT|WB|AWB] [nora|ra] [direct|cached] [EmulationType=0|1|2]
[Strip=<8|16|32|64|128|256|512|1024>] [ExclusiveAccess]
[Cbsize=0|1|2 Cbmode=0|1|2|3|4|7] [unmap]
storcli /cx add VD cachecade r[0|1|10]
drives = [e:]s|[e:]s-x|[e:]s-x,y [WT|WB] [assignvds = 0,1,2]

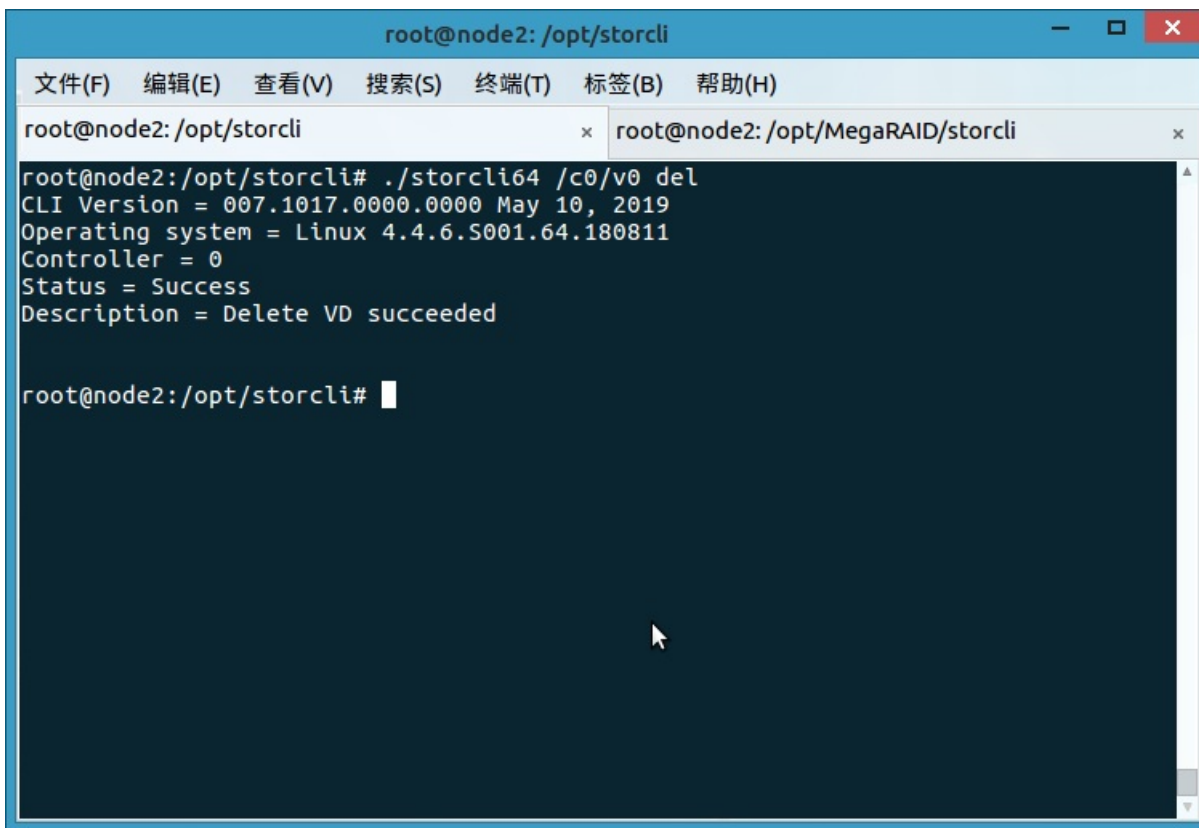
root@node2:/opt/MegaRAID/storcli#
```

列： 创建raid0 ./storcli /c0 add vd r0 drives=252:0-3

创建raid1 ./storcli /c0 add vd r1 drives=252:0,1

创建raid10 ./storcli /c0 add vd r10 drives=252:0-1 drives=252:2-3

4)删除raid命令如有删除不成功的，可在后边加强制删除force



```
root@node2: /opt/storcli
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 标签(B) 帮助(H)
root@node2: /opt/storcli x root@node2: /opt/MegaRAID/storcli x
root@node2:/opt/storcli# ./storcli64 /c0/v0 del
CLI Version = 007.1017.0000.0000 May 10, 2019
Operating system = Linux 4.4.6.S001.64.180811
Controller = 0
Status = Success
Description = Delete VD succeeded

root@node2:/opt/storcli#
```

例如: `./storcli64 /c0 /v0 del force`

5) ubad状态的磁盘

可用 `./storcli64 /c0 /e[num] /s[num] set good` 将ubad状态的磁盘设为ugood

这种状态的磁盘才能组raid, 才能设为直通盘

%1) 磁盘状态设置

可用 `./storcli64 /cx/ex/sx set good/offline/online/missing` 设置某块磁盘的状态

例如: `./storcli64 /c0 /e252 /s15 set good`

good 空闲

online/offline 成员盘上下线

missing 掉线

`./storcli64 /c0/vall show` 查看c0控制下的所有RAID信息

6) 直通盘 (jbod)

a. 设置直通盘

先查看raid直通盘状态 `./storcli64 show jbod`

若为off, 需将raid直通盘状态设为on `./storcli64 set jbod=on`

将某块磁盘设为直通盘 `./storcli64 /c0 /e[num] /s[num] set jbod`

用 `fdisk -l` 查看, 会发现一块盘

b. 取消直通盘

若发现一块磁盘的状态为直通盘, 无法用该盘组raid, 需先取消

先查看raid直通盘状态 `./storcli64 show jbod`

若为off, 需将raid直通盘状态设为on `./storcli64 set jbod=on`

再执行 `./storcli64 /c0 /e[num] /s[num] del jbod`

再执行 `./storcli64 /c0 /e[num] /s[num] show` 查看该盘的状态是否为ugood

再将raid直通盘的状态设为on(看需求) `./storcli64 /c0 set jbod=off`

6. 其他命令

1. 查看磁盘命令

```
storcli /cx[/ex]/sx show
storcli /cx[/eall]/sall show
```

例如：查看控制器1， enclosure1上的4,5位的磁盘信息

```
storcli /cx/e1/s4,5 show
```

查看控制器1， enclosure1上的0,1,2位的磁盘信息

```
storcli /cx/e1/s0-3 show
```

2.磁盘初始化命令

```
storcli /cx[/ex]/sx show initialization
```

```
storcli /cx[/ex]/sx start initialization
```

```
storcli /cx[/ex]/sx stop initialization
```

查看，开始和停止磁盘初始化操作

3.磁盘定位命令

```
storcli /cx[/ex]/sx start locate
```

```
storcli /cx[/ex]/sx stop locate
```

开始和停止定位磁盘

4.警报器相关命令

```
storcli /cx show alarm查看警报器信息
```

```
storcli /cx set alarm=silence暂时关闭警报器鸣叫
```

```
storcli /cx set alarm=off始终关闭警报器鸣叫
```

5.磁盘重建命令

```
storcli /cx[/ex]/sx start rebuild
```

```
storcli /cx[/ex]/sx stop rebuild
```

```
storcli /cx[/ex]/sx show rebuild
```

```
storcli /cx[/ex]/sx pause rebuild
```

```
storcli /cx[/ex]/sx resume rebuild
```

查看RAID磁盘重建过程

6.热备磁盘

前提条件：假设有空闲状态为ugood的磁盘，槽位号为3；有组好的raid， DG号为0将槽位号为3的磁盘作为磁盘组号（drive group）为0的专属热备热备：

```
./storcli64 /c0 /e252 /s3 add hotsparedrive dgs=0
```