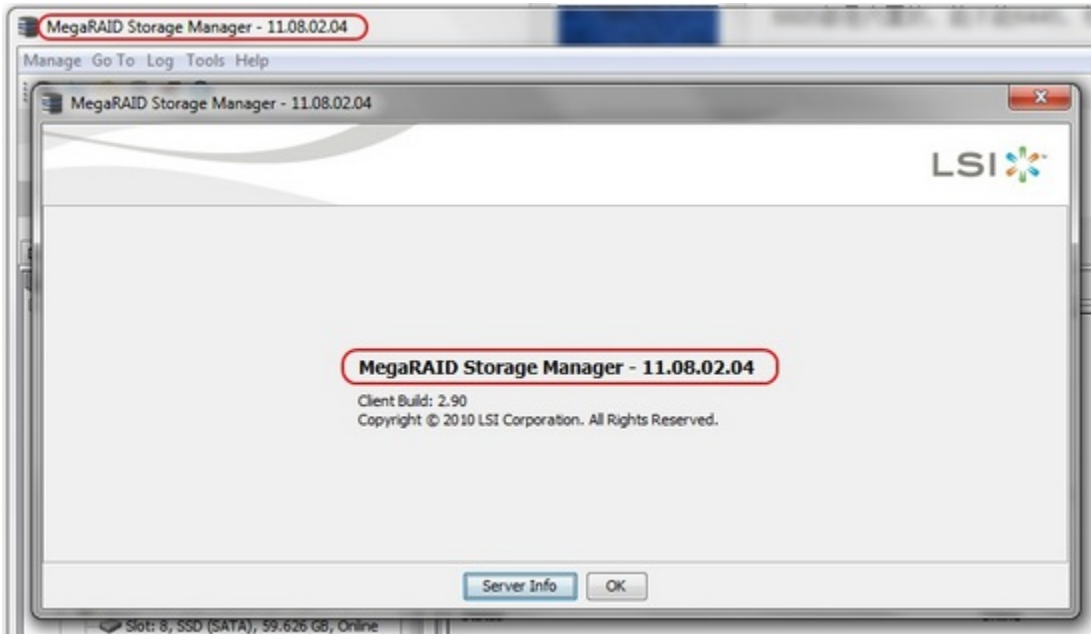


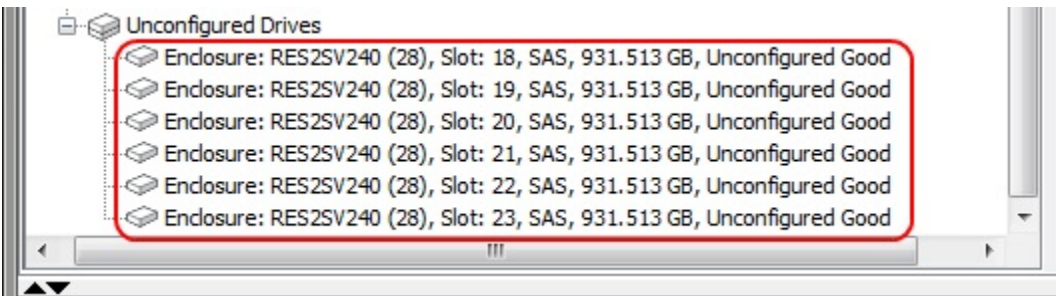


?:OSSLab Vxr,?:thx

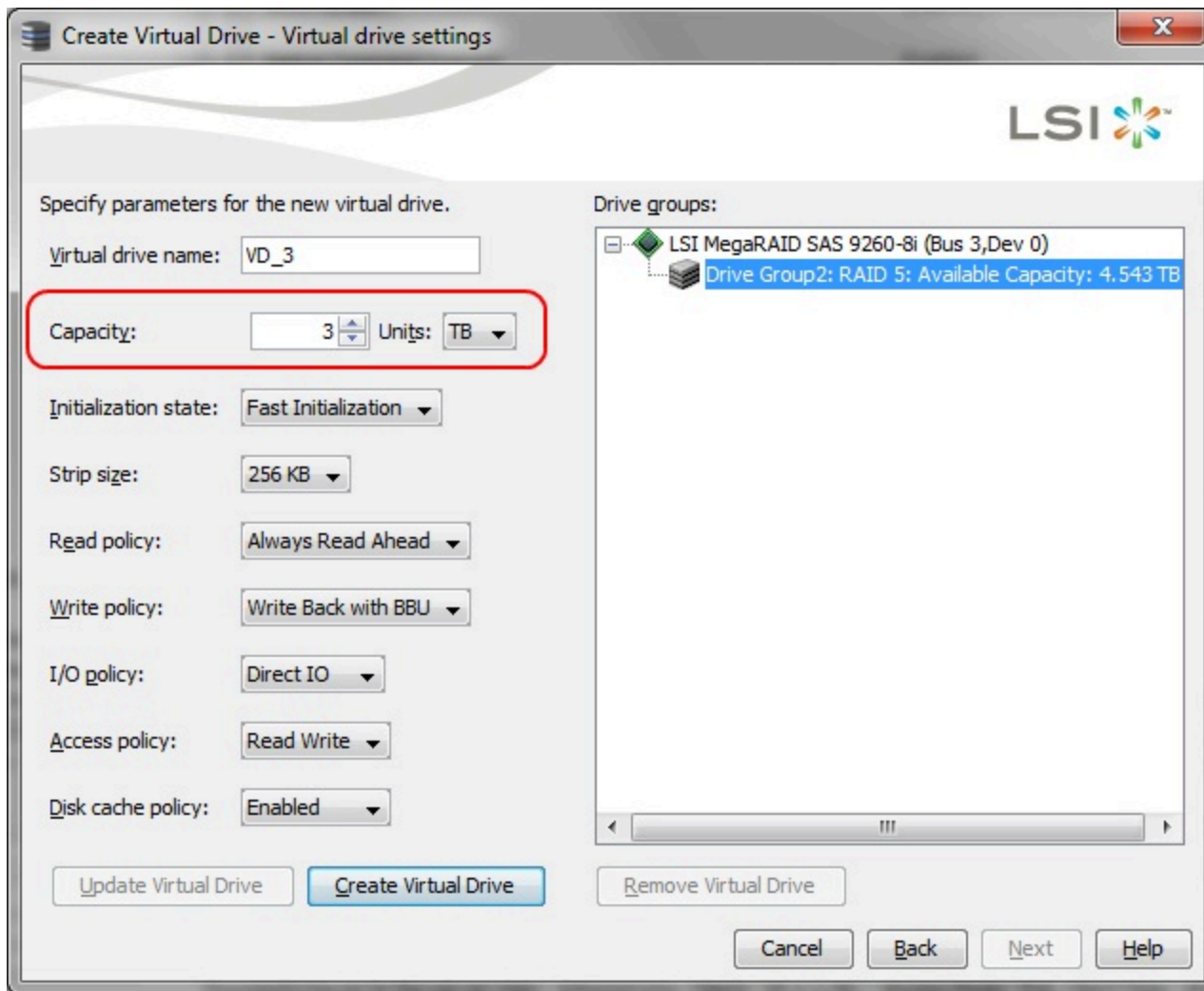
OVE?Online Volume Expansion, ?OCE????, ??????VD(Virtual Disk)?????????????????. ?LSI?????????MegaCLI??.
?????MSM(MegaRAID Storage Manager)?????. ??????????MSM??.



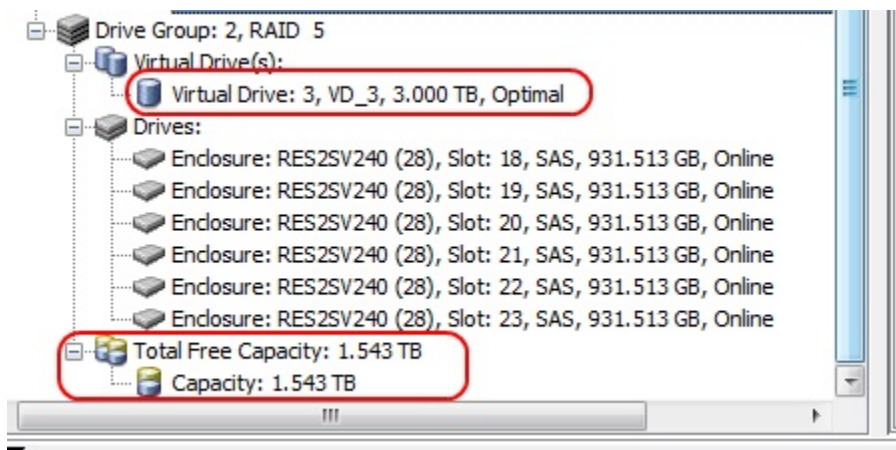
????6?SAS 6Gb/s 1TB HDD????:



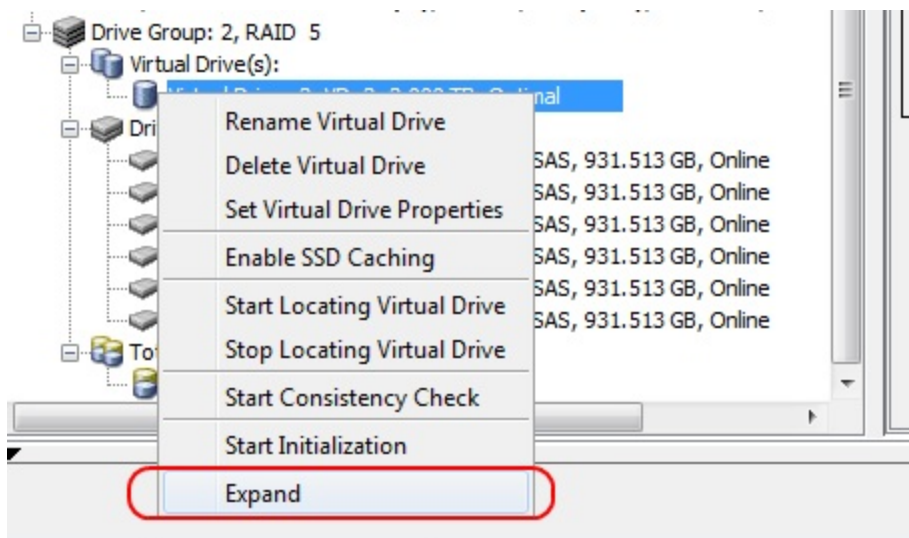
????RAID?VD??, ?????????????, ?????????:



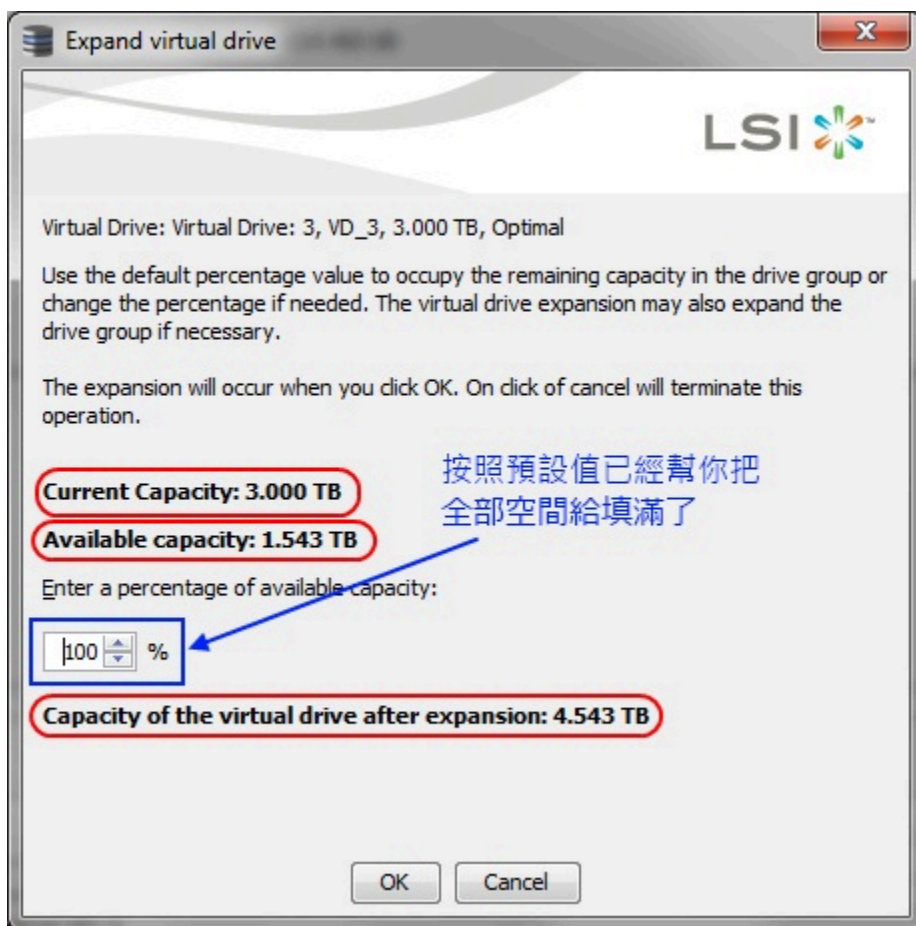
?????, ?????3TB???VD, ???1.5TB?????????OVE?????????3TB VD???????. ?????3TB?VD??, ????????????:



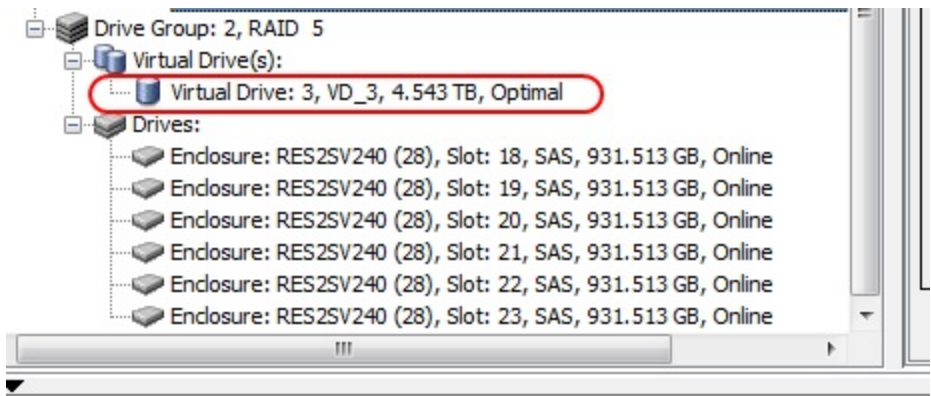
?????????????????Total Free Capacity??, ?????6?HDD?????DG??, ?????3TB?????????????. ??1.543TB????????????? ?OVE????3TB VD???, ?????4.5TB??. ??????????????????VD???, ????????????:



??Expand?????, ??????OVE???. ?????, ??????????????:



????????????????VD?????, ?????100%?????.



???OK???, OVE????????, ?????????VD????????, ?????DG?RAID????????, ?????????parity?????. ???
 OCE????PD????VD???, ???RAID????????, ?????????, ?????VD???3TB???4.5TB?. OVE????VD?
 ??????

Properties	
General:	
RAID Level	5
Name	VD_3
Size	4.543 TB
Parity Size	930.391 GB
Strip Size	256 KB
Virtual Disk State	Optimal
IO and Cache Policies:	
Disk Cache Policy	Enable
Read Policy	Always Read Ahead
IO Policy	Direct IO
Write Policy:	
Current Write Policy	Write Back
Default Write Policy	Write Back with BBU
Access Policy:	
Current Access Policy	Read Write
Default Access Policy	Read Write
CacheCade™ Caching:	
SSD Caching	Disabled

?????MSM??, ???! ?????????DELL PERC family?solution, ?????????f/w?????????
 ??DELL solution???, ??????????:

[http://www.osslab.com.tw/Storage/Enterprise/SAS%e8%88%87RAID/LSI/LSI MegaRAID Driver%e5%92%8cMSM Utility](http://www.osslab.com.tw/Storage/Enterprise/SAS%e8%88%87RAID/LSI/LSI%20MegaRAID%20Driver%e5%92%8cMSM%20Utility)

Note:

1. You cannot change the configuration of a RAID 10, or RAID 50, or RAID 60 virtual drive. You cannot change a RAID 0, RAID 1, RAID 5, or RAID 6 configuration if two or more virtual drives are defined on a single drive group.
2. The LSI SAS1078 RoC does NOT support this function.

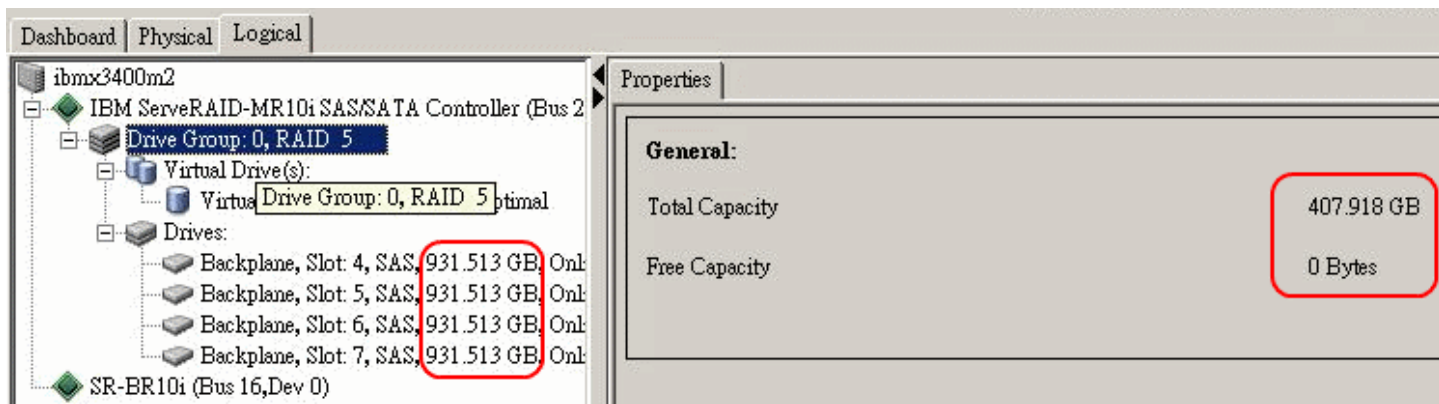
Question&Answer:

Q1. ?????????OVE??VD????, ??rebuild????HDD, ???tty log??:

Online Volume Expansion(Virtual Disk Resizing)

T93: PD	Flags	State	Type	Size	S	N	Vendor	Product	Rev	P	C	ID	SAS Addr	Port	Phy	DevH
T93: 4	f1400005	00020	00	74706daf	0	0	IBM-ESXS	ST31000424SS	BC2B	0	0	09	5000c500414e2025	04	04	09
T93: 5	f1400005	00020	00	74706daf	0	0	IBM-ESXS	ST31000424SS	BC2B	0	0	0a	5000c5004149da99	05	05	0a
T93: 6	f1400005	00020	00	74706daf	0	0	IBM-ESXS	ST31000424SS	BC2B	0	0	0b	5000c500414e36d5	06	06	0b
T93: 7	f1400005	00020	00	74706daf	0	0	IBM-ESXS	ST31000424SS	BC2B	0	0	0c	5000c50041496845	07	07	0c
T93: 100	00400005	00020	03	00000000	0	0	LSI	SMP/SGPIO/SEP	1279	0	0	ff		0	00	ff

?????????4?1TB SAS 6Gb/s HDD, ?????4?146GB SAS 2.0 HDD. ?????rebuild????4???, ?????OVE????VD?????. ????



Free Capacity????????????, ??????. ?????????????

A1. ????: megacli -ldexpansion -p100 -l0 -a0 . ??????????????:
 Online Capacity Expansion without adding drivers is not supported

Exit Ocde: 0X00
 ?????????????RAID HBA?NVRAM??MFC config?????. ?????????OVE?????. ?????????????RAID HBA??.

Q2. ?????????????????

A2. ??megacli????????????????????????????



?????????, ??????Online Volume Expansion:

```
Administrator: C:\Windows\system32\cmd.exe
Failed Disks      : 0

Supported Adapter Operations
=====
Rebuild Rate      : Yes
CC Rate           : Yes
BGI Rate          : Yes
Reconstruct Rate  : Yes
Patrol Read Rate  : Yes
Alarm Control     : Yes
Cluster Support   : Yes
BBU               : Yes
Spanning          : Yes
Dedicated Hot Spare : Yes
Revertible Hot Spares : Yes
Foreign Config Import : Yes
Self Diagnostic   : Yes
Allow Mixed Redundancy on Array : No
Global Hot Spares : Yes
Deny SCSI Passthrough : No
Deny SMP Passthrough : No
Deny STP Passthrough : No
Support Security  : No
Snapshot Enabled  : No
Support the OCE without adding drives : Yes
Support PFK       : Yes
Support PI        : No
Support Boot Time PFK Change : No
Disable Online PFK Change : No
PFK TrailTime Remaining : 0 days 0 hours
Support Shield State : No
Block SSD Write Disk Cache Change: No

Supported UD Operations
=====
Read Policy      : Yes
```