# ServeRAID C100 配置指南

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ServeRAID C100 软件阵列是一个主板集成的软件阵列功能,下面列举说明了一些 ServeRAID C100 的常用操作。

#### 一. 如何配置阵列

1.开机按 F1 进入 UEFI 配置界面,首先需要开启软件阵列功能,选择 System Settings->Device and I/O Ports->Configure SATA as xxx,把默认的 IDE 修改为 RAID,然后保存配置,重启机器,机器启动后再次按 F1 进入 UEFI 配置界面。

注:如果是安装不支持 ServeRAID C100 软件阵列的操作系统,Configure SATA as 的选项需要恢复为默认的 IDE。

igure SATA as ble / Disable Onboard Du ble / Disable legacy RO option ROM execution of e Gen1/Gen2 Speed Selec rial Port A: 03F8 rial Port B: 02F8 msole Redirection Settim	swice (s) 1 execution oder tion IDE AHCI KAIL SS	This will configure SATA as IDE,AHCI and RAID (Software RAID mode, not control hardware).
		P P

2.进入阵列配置界面,选择 System Settings->Storage->LSI Software RAID Configuration Utility

I STATE OF THE OWNER OF THE OWNER OF		
mtroller Management) irtual Drive Management) ive Management]		Manages controller properties, clears configurations, and performs high-level controller functions.
14=Move Highlight 🗸	Enter>=Select Entru	Esc=Exit

### 3.选择 Virtual Driver Management



4.选择 Create Configuration,在 Select RAID Level 里选择 RAID 级别, ServeRaid C100 可以支持 RAID0 和 RAID1,示例中选择配置 RAID1。

ISave Configuration]		
Select Drives From	<unconfigured< td=""><td></td></unconfigured<>	
[Select Drives]	Capacity>	
Configure Virtual Drive P Virtual Drive Name	arameters:	
Virtual Drive Size Virtual Drive Size Unit	(0) (68)	
Stripe Size	<64 KB>	
Disable Background	<nochange> <no></no></nochange>	
Initialization [Save Configuration]		
Ti=Move Highlight	<enter>=Select Entry</enter>	Esc-Exit

5.在 Select Drives 中选择配置在 RAID1 里的硬盘,选择两块硬盘,在硬盘后面的方框里按空 格键打上 x,最后选择 Apply Changes

Apply Changesl	
elect Hedia Type	CONTAN
boose Unconfigured Defus	NJRIH2
rive::0: SATA.	D()
75883MB, Unconfigured	
lood	
rive::2: SATA,	
175883MB, Unconfigured	
Good	
Uheck All]	
oppig changes)	
14=Nove Highlight	<pre><spacebar>Toggle Checkbox Esc=Exit</spacebar></pre>

6.选择好硬盘后,可以看到在 Virtual Driver Size 中自动出现了阵列的容量,确认无误后选择 Save Configuration

Virtual I	)rive Management > Create	Configuration 、
[Save Configuration] Select RAID Level	<raid1></raid1>	
[Select Drives] Configure Virtual Drive I	Capacity> Parameters:	
Virtual Drive Name Virtual Drive Size Virtual Drive Size Unit		
Drive Cache Disable Background Initialization [Save Configuration]	<nochange> <no></no></nochange>	
†4=Move Highlight	<enter>=Select Entry</enter>	Esc=Exit

7.在接下来的确认画面中,按空格键在 Confirm 选项后打上 X,然后选择 Yes 确认。

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Creating Virt the associate	ual Drives d Drives t	will cause o be permane	the data on ntly deleted.		
re you sure operation?	you want t	o continue w	ith this		
Confirm CYes] CNo]					
T1=Move Hig	hlight	<spacebar></spacebar>	Toggle Checkb	ox Esc=Exit	

8.在 Virtual Driver Management->Manage Virtual Drive Properties 选项中,可以查看刚刚创建的 RAID 的状态,我们可以看到阵列是 RAID1 状态是 Optimal,是正常的状态。

(Applu Changes]		Submits the changes
Select Virtual Drive	<pre><virtual 0:<br="" drive="">MegaSR R1 #0, RAID1, 475803MB, Optimal&gt;</virtual></pre>	made to the entire form.
Virtual Drive Properties:		
Virtual Drive Name Target ID RAID Level Virtual Drive Status	MegaSR R1 #0 [0] <raid1> <optimal></optimal></raid1>	
Virtual Drive Capacity (MB)	[475883]	
Segment Size Virtual Drive Policies:	<64 KB>	
Disk Cache	<disable></disable>	
†↓=Move Highlight	<enter>=Select Entru</enter>	Esc=Exit

#### 二. 如何删除阵列

选择 Virtual Drive Management->Select Virtual Drive Operations,选择 Delete Virtual Drive,回 车。在确认页面用空格选中 Confirm 后点选 Yes 确认,可完成删除阵列

Select Virtual Drive	(Virtual Drive 0: MegaSR R1 #0. RAIDI. 475883MB. Optimal>	
IDelete Virtual Drive Virtual Drive Operations: Virtual Drive Operation IStart Operation IStop Operation	<fast Initialization&gt;</fast 	
T1=Move Highlight	<enter>=Select Entry</enter>	Esc=Exit

#### 三. 如何设置热备份硬盘

1.选择 Drive Management->Select Drive Operations, 在 Select Drive 中选择需要设置为 Hot Spare 盘的硬盘,在 Drive Operation 中选择 Assign Global Hot Spare Drive, 然后选择 Start Operation 执行操作。

Select Drive	<drive::0: sata,<="" th=""><th></th><th></th></drive::0:>		
	475883MB, Unconfigured		
Drive Operations:	60002		
Drive Operation	CAusign Global Hot		
[Start Operation]	apple and the		
ti-Moun Highlight	(Enter)-Select Entru	Esc=Exit	

2.在 Drive Management->View Global Hot Spare Drives 中可以查看设置好的 Hot Spare 硬盘

lve::0: SATA, <b>175883MB</b> , Hot	Spare
14=Move Highlight	Esc=Exit

3.同样在 Drive Management->Select Drive Operations 界面中可以将 Drive Operation 选择为 Unassign Hot Spare Drive 来取消 Hot Spare 硬盘。

### 四. 硬盘掉线如何恢复

1.如果发生硬盘掉线情况,首先在 Virtual Drive Management->Manage Virtual Drive Properties 界面中,可以看到 RAID1 是处于 Degraded 状态的。

Apply Changes] Select Virtual Drive	<virtual 0:<br="" drive="">MegaSR R1 #0, RAID1, 475883MB, Degraded&gt;</virtual>	Submits the changes made to the entire form.
lirtual Drive Name	NegaSR R1 #0	
arget ID	[0]	
HIV Level	<raid1></raid1>	
lirtual Drive Capacity (MB)	(475883)	
Segment Size Jirtual Drive Policies:	<64 KB>	
lisk Cache	<disable></disable>	
	•	
11=Move Highlight	<enter>=Select Entry</enter>	Esc=Exit

2.进一步选择 View Associated Drivers,可以看到 Drive0 是处于 Offline 状态,

lected Virtual Drive	Virtual Drive 0: MegaSR R1 80, RMID1, 47588348, Degraded
ive::0: SATA,	0
Societ, offfine, Spando ive —:—:2: SATA, S88378, On line, Spando iew Drive Properties]	
11-Move Highlight	Esc=Exit

3.选择 Drive Management->Select Drive Operations 界面中选择 Offline 的 DriveO, 在 Drive Operation 中选择 Rebuild,选择 Start Operation 开始阵列重建(Rebuild)操作

elect Drive rive Operations: rive Operation Start Operation]	(Drive:0: SATA), 475803918: Offline) (Rebuild)		
†1≓Hove Highlight	<enter>=Select Entru</enter>	Esc=Exit	

4.然后我们可以看到 DriveO 处于 Rebuilding 状态,完成后会恢复成 Online 状态,RAID1 将恢 复成 Optimal 状态。

elected Virtual Drive	Virtual Drive 0: MegaSR R1 #0, RAID1, 475883MB, Degraded
ssociated Drives:	
75883MB, Rebuilding, pan#8	
rive::2: SATA, 75883MB, Online, Spanm0 Wiew Drive Properties]	
T4=Move Highlight	Esc=Exit

#### 五. 如何在一个 RAID 上创建多个 Virtual Drive

在某些特定情况下,我们可能需要把一个 RAID 划分为 2 个或者多个 Virtual Drive,下面以建立一个两块盘的 RAID0 为例来说明:

1.建立一个 RAIDO, 全部容量是 929GB, 这里我们先建立一个 500GB 的 Drive Group, 在 Virtual Drive Size 选项中把 929GB 修改为 500GB, 然后选择 Save Configuration, 在确认画面中按空 格选中 Confirm 后用 Yes 确认完成 Virtual DriveO 的创建。

ISave Configuration]	
	<raid0></raid0>
	<unconfigured< th=""></unconfigured<>
	Capac i ty>
[Select Drives]	
Configure Virtual Drive H	arameters:
Virtual Drive Name	
Virtual Drive Size	1500 1
Virtual Drive Size Unit	<gb></gb>
Stripe Size	<64 KB>
Drive Cache	<nochange></nochange>
Disable Background	<no></no>
Initialization	
[Save Configuration]	
0.0	Des
0-9=0alld inputs	<enter>=Complete Entry Esc=Exit</enter>

2.下面创建第二个 Virtual Drive, 在 Virtual Drive Management->Create Configuration, 将 Select Drives From 选项选为 Free Capacity

Elect Port Level	CROTOD		
Select Drives From	(KHLU0) (Free Canacitu)		
[Select Drive Groups]	Gree capacity?		
Configure Virtual Drive I			
Virtual Drive Name			
Virtual Drive Size	[0]		
Virtual Drive Size Unit	<gb></gb>		
Stripe Size Deine Cache	(b) KB>		
Disable Background	(No)		
Initialization	And the second sec		
[Save Configuration]			
14=Move Highlight	(Enter)=Select Entru	Esc=Exit	

3.选择 Select Drive Groups,按空格选中之前建立的 929GB 的 RAID0,按 Apply Changes 确认, Virtual Drive Size 部分是之前剩余的 429G 空间。选择 Save Configuration,在确认画面中按空格选中 Confirm 后用 Yes 确认。

Apply Changes] noise Drive Group rive Group 0: RAIDO ree Space: isociated Drives hpply Changes]	DXI 439766MB KDrive::0: SATA, 47598B3MB, <u>Onlines</u>	
14=Move Highlight	<enter>=Select Entry</enter>	Esc=Exit

4. 在 Virtual Drive Management->View Drive Group Properties 界面中,我们可以看到在一个 RAID0 上建立的两个 Virtual Drive,分别是 500GB 的 Virtual Drive0 和 429GB 的 Virtual Drive1

acity Allocation		Drive Group #0 «Virtual Drive 0: MegaSR R0 #0. Ro 512000MB. Optimal			: RAIDO. U2				
	<b>Virtual</b> Virtual	Drive Drive	0: 1:	<mark>HegaSR</mark> HegaSR	R9 R0	<b>80.</b> 11.	RAIDO. RAIDO.	<b>51209010.</b> 43976688.	Optinal Optinal
1=Hou	e Highlig	ht		<enter>=0</enter>	Comp	lete	Entry	Esc=Ex	it

#### 六. 如何确认硬盘状态

选择 Drive Management->View Drive Properties,在 Select Drive 上按回车可以看到硬盘的数量 和状态,在图里中我们看到安装了 2 块 500G 的硬盘,状态是 Unconfigured Good,可以配置 阵列。

Select Drive Drive Properties:	<pre>CDrive::0: SATA, 475883MB, Unconfigured Good&gt;</pre>
State Drive	:0: SATA, 475883MB, Unconfigured Good
Coerced Size Drive	::2: SATA, 475883MB, Unconfigured Good
Revision Drive	::4: SATA, OMB, Unconfigured Good
Connected Pent	
ledia Errors	[1]
Predicted Fail Count	[0]
Cache Setting	(Disabled)
Available Size (MB)	[475883]
14=Move Highlight	<enter>=Complete Entry Esc=Exit</enter>