確定SSD驅動器的開機時間

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背景

「開機時間」是確定SSD壽命的重要指標。為了識別受影響的固態驅動器(SSD),您需要下載3個 rd允許檢視開機時間的當事方實用程式(PoH)在某些情況下,還會出現模型#對於受影響的SSD。 在下面您將找到有關從何處獲取實用程式以及如何使用它們的說明。

從何處獲取實用程式

有4選擇不同的實用程式rom取決於您的作業系統和需求。 請檢視下表。

工具	適用的OS	工具源
SmartMon工具	Linux、Windows、VMware	https://sourceforge.net/projects
sg3_utils	Linux、Windows	http://sg.danny.cz/sg/sg3_utils.
SanDisk工具	Linux、Windows	https://kb.sandisk.com/app/ang detail/a_id/18565/~/lightning-ge
		ssd-drive-firmware https://docs.broadcom.com/do
Storcli實用程式	所有作業系統	7.1410.0000.0000 Unified Sto
		ZID

有關如何使用每個實用程式的步驟。

每個應用工具都需要具備一些在Linux、VMware和Windows中安裝軟體的知識。 安裝之前,請務 必閱讀所有自述檔案。

Windows版SmartMonTools - JBOD模式

附註: 如果您使用的是RAID控制器,則無法通過Windows收集此資料

 5. 安裝:轉到上表中發佈的下載連結並下載和安裝smartmontools實用程式通過上面的連結獲取 smartctl Windows安裝程式檔案。執行安裝檔案:

smartmontools-7.1-1.win32-setup.exe 開啟命令提示符轉到資料夾:

C:\Program Files\smartmontools\bin

2. 檢查驅動器韌體版本: 在命令下運行以獲取目標驅動器的裝置名稱。

smartctl -scan

C:\Progra	am F	iles\sn	nartmontoo	ls\bin>smartctl	scan
/dev/sda	-d	ata # /	/dev/sda,	ATA device	
/dev/sdb	-d	ata # /	/dev/sdb,	ATA device	
/dev/sdc	-d	scsi #	/dev/sdc,	SCSI device	
/dev/sdd	-d	scsi #	/dev/sdd,	SCSI device	

[jbod windows smartmon fw 1]讀取驅動器韌體版本,如下所示:

tmontools\bin>smartctl -i /dev/sdc
30 r5022 [x86 64-w64-mingw32-2016] (sf-7.1-1)
, Bruce Allen, Christian Franke, www.smartmontools.org
Condition ===
SanD15K
LT1600MO
C405
SPC-4
1,600,321,314,816 bytes [1.60 TB]
512 bytes
ioned, LBPRZ=1
Solid State Device
2.5 inches
0x5001e82002818248
42041928
disk
SAS (SPL-3)
Mon Feb 04 15:54:19 2019 PST
Available - device has SMART capability.
Enabled
Disabled or Not Supported

[jbod windows smartmon fw 2]

3. 檢查開機時間: 安裝之後,您將使用smartmontools包中的「smartctl」實用程式。開啟 CMD,轉到smartmontools目錄 並鍵入以下內容來查詢SSD清單:

smartctl.exe --scan

一次 確定要檢查的SSD後,可以鍵入以下兩個命令 訂購 以獲得所需的輸出 (其中X是要檢查的 驅動器碟符��

smartctl -t short /dev/sdX - Wait 10 seconds before running the second command smartctl -l selftest /dev/sdX

查詢「終身」小時 從1st 線路。 這將是PoH的最新記錄。

:\Program Files\smartmontools\bin>smartctl --scan /dev/sda -d ata # /dev/sda, ATA device /dev/sdb -d scsi # /dev/sdb, SCSI device /dev/sdc -d scsi # /dev/sdc, SCSI device C:\Program Files\smartmontools\bin>smartctl -t short /dev/sdb smartctl 7.1 2019-12-30 r5022 [x86_64-w64-mingw32-2016] (sf-7.1-1) Copyright (C) 2002-19, Bruce Allen, Christian Franke, www.smartmontools.org Short Background Self Test has begun Use smartctl -X to abort test C:\Program Files\smartmontools\bin>smartctl -l selftest /dev/sdb smartctl 7.1 2019-12-30 r5022 [x86_64-w64-mingw32-2016] (sf-7.1-1) Copyright (C) 2002-19, Bruce Allen, Christian Franke, www.smartmontools.org === START OF READ SMART DATA SECTION === The first reord is the latest SMART Self-test log LifeTime LBA_first_err [SK ASC ASQ] Num Test Status segment Description (hours) number 1 Background short Completed 3883 2 Background short Completed 3 Background short Completed 3882 3880 .ong (extended) Self-test duration: 5000 seconds [83.3 minutes]

[jbod windows smartmon]

Linux版SmartMonTools - JBOD模式

 1. 安裝:轉到上表中發佈的下載連結,下載並安裝smartmontools實用程式。獲取smartctl 安裝 通過以上鍊接獲得檔案Linux版本。解除 安裝 檔案。

tar -zxvf smartmontools-7.1.tar.gz 轉到資料夾:

smartmontools-7.1 按順序運行以下命令。

./configure make make install

2. 檢查驅動器韌體版本:「sdb」是目標驅動器的裝置名稱。

smartctl -i /dev/sdb

[root@localhost ~]# smartctl -i /dev/sdb
smartctl 6.5 2016-05-07 r4318 [x86_64-linux-3.10.0-957.el7.x86_64] (local build)
Copyright (C) 2002-16, Bruce Allen, Christian Franke, www.smartmontools.org

=== START OF INFORMATION SECTION === Vendor: SanDisk Product: LT1600M0 Revision: C405 Compliance: SPC-4 User Capacity: 1,600,321,314,816 bytes [1.60 TB] Logical block size: 512 bytes LU is resource provisioned, LBPRZ=1 Rotation Rate: Solid State Device Form Factor: 2.5 inches Logical Unit id: 0x5001e82002818248 Serial number: 42041928 Device type: disk Transport protocol: SAS (SPL-3) Local Time is: Mon Feb 4 19:38:03 2019 CST SMART support is: Available - device has SMART capability. SMART support is: Enabled Temperature Warning: Disabled or Not Supported

[jbod linux smartmon fw]

3. 檢查開機時間(POH) 轉到smartmontools目錄,通過鍵入以下內容找到SSD清單:

esxcli storage core device list

一旦確定要檢查哪個SSD,您就可以進行檢查鍵入以下兩個命令以獲取所需的輸出(其中X是 要檢查的驅動器碟符)��

smartctl -t short /dev/sdX - Wait 10 seconds before running the second command smartctl -l selftest /dev/sdX

查詢「Lifetime」小時從1st線路。 這將是PoH的最新記錄。 [root@localhost ~]# smartctl -t short /dev/sda smartctl 7.0 2018-12-30 r4883 [x86_64-linux-3.10.0-957.el7.x86_64] (local build) Copyright (C) 2002-18, Bruce Allen, Christian Franke, www.smartmontools.org

Short Background Self Test has begun
Use smartctl -X to abort test
[root@localhost ~]# smartctl -l selftest /dev/sda
smartctl 7.0 2018-12-30 r4883 [x86_64-linux-3.10.0-957.el7.x86_64] (local build)
Copyright (C) 2002-18, Bruce Allen, Christian Franke, www.smartmontools.org

The first one is the latest record === START OF READ SMART DATA SECTION === SMART Self-test log Num Test segment LifeTime LBA first err [SK ASC ASQ] Status Description number (hours) # 1 Background short Completed 6439 · [+ + -1 -# 2 Background short Completed 6433 - [-. -1 - [-# 3 Background short Completed 6433 -] + # 4 Reserved(7) Aborted (device reset ?) 317 - [--]

Long (extended) Self-test duration: 5000 seconds [83.3 minutes]

[root@localhost ~]#

[jbod linux smartmon]

適用於ESXi的SmartMonTools - JBOD模式

1. 安裝:轉到上表中發佈的下載連結,下載並安裝smartmontools實用程式 獲取smartctl ESXi 安裝 檔案通過上面的連結。在ESXi主機上啟用外殼和SSH。

T Navigator	Iocalhost.localdomain - Manage		
- 🗍 Host	System Hardware Licensing	Packages Services Securi	ty & users
Manage	b Start - Stap C Dartad	Datrach Actions	
Monitor			
Nichual Machines	Name 🔺 🗸 🗸	Description v	Status ~
	Alah di walah dan	011 0	
, Storage	stcbo-watchoog	Cityl Server	Stopped
> Q Networking 1	snmpd	SNMP Server	Stopped
	TSM	ESXi Shell	Running
	TSM-SSH	SSH	Running
	vmsyslogd	Syslog Server	Running
	vpxa	VMware vCenter Agent	Stopped
	xorg	X.Org Server	Stopped

[jbod esxi smartmon安裝]

通過ftp工具將檔案「smartctl-6.6-4321.x86_64.vib」上傳到ESXi主機「tmp」資料夾。通過 SSH連線到ESXi主機。將ViB接受級別設定為CommunitySupported。

esxcli software acceptance set --level=CommunitySupported 然後安裝軟體包。

esxcli software vib install -v /tmp/smartctl-6.6-4321.x86_64.vib

2. 檢查驅動器韌體版本 通過SSH連線到ESXi主機。然後運行以下命令以獲取目標驅動器的裝置 名稱和韌體版本。

esxcli storage core device list

naa.5001e82002818248

Display Name: Local SanDisk Disk (naa.5001e82002818248) Has Settable Display Name: true Size: 1526185 Device Type: Direct-Access Multipath Plugin: NMP Devfs Path: /vmfs/devices/disks/naa.5001e82002818248 Vendor: SanDisk Model: LT1600MO Revision: C405 SCSI Level: 6 Is Pseudo: false Status: on Is RDM Capable: true Is Local: true Is Removable: false Is SSD: true Is VVOL PE: false Is Offline: false Is Perennially Reserved: false Queue Full Sample Size: 0 Queue Full Threshold: 0 Thin Provisioning Status: yes Attached Filters: VAAI Status: unknown Other UIDs: vml.02000000000001e820028182484c5431363030

[jbod esxi smartmon fw] 檢查開機時間(POH) 請轉到smartmontools目錄,通過鍵入

esxcli storage core device list

確定要檢查的SSD後,可以鍵入以下兩個命令以獲取所需的輸出(其中 naa.xxx 是要檢查的驅 動器碟符��

/opt/smartmontools/smartctl -d scsi -t short /dev/disks/naa.xxx - Wait 10 seconds before running the second command /opt/smartmontools/smartctl -d scsi -l selftest /dev/disks/naa.xxx 查詢從第一行開始的「Lifetime」小時。 這將是PoH的最新記錄。

[roo	t@localhost:~] /op	t/smartmontools	/smartctl -d scsi	-t short	/dev/disks/naa	.500	1e82	0028182	48
smar	tctl 6.6 2016-05-1	0 r4321 [x86_64	-linux-6.5.0] (da	ily-201605	10)				
Сору	right (C) 2002-16,	Bruce Allen, C	hristian Franke,	www.smartn	ontools.org				
Shor	t Background Self	Test has begun							
Use	smartctl -X to abo	ort test							
[roo	t@localhost:~] /op	t/smartmontools	/smartctl -d scsi	-l selfte	st /dev/disks/	naa.	5001	e820028	18248
smar	tctl 6.6 2016-05-1	0 r4321 [x86 64	-linux-6.5.01 (da	ilv-201605	10)				
Conv	right (C) 2002-16.	Bruce Allen, C	hristian Franke	www.smartn	ontools.org				
copy	ingine (c) 2002 10,	bruce Accen, c	in iseran iranke,	inni sinar ci	Ion coors ton B				
	START OF READ SMAR								
CHAD	T Colf_toot log	I DATA SECTION							
SMAR	Self-test log								
Num	lest	Status	segment	Lifelime	LBA_first_err	- Esk	ASC	ASQJ	
	Description	NAME OF TAXABLE	number	(hours)					
# 1	Background short	Completed		2505	87	-] -		-]	
# 2	Background short	Completed		2409	17. 17.	· [-	177	-3	
Long	(extended) Self T	est duration: 2	9600 seconds [493	.3 minutes]				

[jbod esxi smartmon]

Sg3_utils for Windows - JBOD模式

1. 安裝 轉到上表中發佈的下載連結,下載並安裝 sg3_utils 公用事業通過上面的連結獲取smartctl Windows安裝程式檔案。執行安裝檔案:

smartmontools-7.1-1.win32-setup.exe 開啟命令提示符轉到資料夾:

C:\Program Files\smartmontools\bin

2. 檢查驅動器韌體版本: 在命令下運行以獲取目標驅動器的裝置名稱。



[jbod windows sg3_utils fw 1]如下所示讀取驅動器韌體版本

smartctl -i /dev/sdc

C:\Program Files\smartmontools\bin>smartctl -i /dev/sdc smartctl 7.1 2019-12-30 r5022 [x86_64-w64-mingw32-2016] (sf-7.1-1) Copyright (C) 2002-19, Bruce Allen, Christian Franke, www.smartmontools.org === START OF INFORMATION SECTION === Vendor: SanDisk Product: LT1600MO Revision: C405 Compliance: SPC-4 User Capacity: 1,600,321,314,816 bytes [1.60 TB] Logical block size: 512 bytes LU is resource provisioned, LBPRZ=1 Solid State Device Rotation Rate: Form Factor: 2.5 inches Logical Unit id: 0x5001e82002818248 Serial number: Device type: 42041928 disk Transport protocol: SAS (SPL-3) Local Time is: Mon Feb 04 15:54:19 2019 PST SMART support is: SMART support is: Available - device has SMART capability. Enabled Temperature Warning: Disabled or Not Supported

[jbod windows sg3_utils fw 2]

3. 檢查開機時間: 轉到 sg3_utils 目錄,並通過鍵入以下內容找到SSD清單:

^{sg_scan} 確定要檢查的SSD後,可以鍵入以下內容g命令(其中X是要檢查的驅動器號):

sg_logs --page=0x15 pdX 查詢「累計開機(分鐘)"。 C:\Users\Administrator\Downloads\sg3_utils-1.45mgw64>sg_scan PDØ [C] ST1000NX0423 CT05 S4702TL2 C405 42211160 PD1 SanDisk LT0400MO PD2 SanDisk LT1600MO C405 42041928 C:\Users\Administrator\Downloads\sg3_utils-1.45mgw64>sg_logs --page=0x15 pd2 SanDisk LT1600MO C405 Background scan results page [0x15] Status parameters: Accumulated power on minutes: 144762 [h:m 2412:42] Status: background medium scan is active Number of background scans performed: 36750 Background medium scan progress: 1.13831 % Number of background medium scans performed: 36750

[jbod windows sg3_utils]

Sg3_utils for Linux - JBOD模式

1. 安裝: 轉到上表中發佈的下載連結,下載並安裝sg3_utils實用程式獲取sg3_utils 安裝 通過以上 鍊接獲得檔案Linux版本。解除 安裝 檔案。

tar -zxvf sg3_utils-1.45.tgz 轉至文件夾'sg3_utils-1.45'。按順序運行以下命令。 make

make install

2. 檢查驅動器韌體版本 「sdb」是目標驅動器的裝置名稱。

sg_logs --page=0x33 /dev/sdb [root@localhost ~]# sg logs --page=0x33 /dev/sdb SanDisk LT1600H0 C405 SanDisk C405 No ascii information for page = 0x33, here is hex: 00 33 00 07 c8 00 00 03 08 56 55 5f 50 41 47 45 53 00 01 03 08 01 02 03 04 05 06 07 08 00 02 03 08 10 2.0 09 0a 0b 0c 0d 0e 0f 10 00 03 03 08 12 2f 00 00 00 00 00 00 00 04 03 08 00 00 00 00 00 00 00 00 30 [truncated after 64 of 1996 bytes (use '-H' to see the rest)]

[jbod linux sg3_utils fw]

3. 檢查開機時間 確定要檢查的SSD後,可以鍵入以下命令(其中X是要檢查的驅動器碟符):

sg_logs --page=0x15 /dev/sdX

尋找「Cumulated power on minutes」。 [root@localhost -]# sg_logs --page=0x15 /dev/sdb SanDisk LT1600M0 C405 Background scan results page [0x15] Status parameters: Accumulated power on minutes: 372254 [h:m 6204:14] Status: background medium scan is active Number of background scans performed: 3321 Background medium scan progress: 3.52 % Number of background medium scans performed: 3321

[jbod linux sg3_utils.jpg]

Windows版Sandisk工具 — JBOD模式

1. 安裝: 轉到上表中發佈的下載連結,下載並安裝sg3_utils實用程式通過上面的連結獲取smartctl Windows安裝程式檔案。執行安裝檔案

smartmontools-7.1-1.win32-setup.exe 開啟命令提示符轉到資料夾:

C:\Program Files\smartmontools\bin

2. 檢查驅動器韌體版本 在命令下運行以獲取目標驅動器的裝置名稱。



[jbod windows sandisk fw]

3. 檢查開機時間 要標識要檢查的驅動器,請鍵入以下命令:

scli show all

確定要檢查的SSD後,可以鍵入以下命令(其中X是要檢查的驅動器碟符):

scli show diskx -S 尋找「總開機小時數」。

C:\Program Files\SanDisk\scli\bin64>scli show all SanDisk scli version 1.8.0.12 Copyright (C) 2014 SanDisk 01/30/2019 18:30:57 Port Capacity State Boot DeviceSerial# Model Device SATA 1.00 TB Unknown Yes 54702TL2 ST1000NX0423 SAS 400.09 GB Good No 42211160 LT0400MO DISKØ SAS 400.09 GB Good No 42211160 SAS 1.60 TB Good No 42041928 DISK1 DISK2 LT1600MO Command Executed Successfully. C:\Program Files\SanDisk\scli\bin64>scli show disk2 -5 SanDisk scli version 1.8.0.12 Copyright (C) 2014 SanDisk 01/30/2019 18:55:39 Statistics Information for disk2 : 1 % ife Used : 39 Celsius Temperature Total Read : 164.96 TB Total Write : 275.10 TB Total Read Commands : 12052397070 Total Write Commands : 18756685157 Read Errors Program Events : 0 Background Read Events : 0 GList Count Lifetime Max Temperature : 73 Celsius Total Power on Hours : 2409 Command Executed Successfully.

[jbod windows sandisk]

Linux版Sandisk工具 — JBOD模式

 1. 安裝 轉到上表中發佈的下載連結,下載並安裝sg3_utils實用程式獲取Cli 安裝 通過以上鍊接獲 得檔案Linux版本。解壓縮 安裝 檔案。轉到資料夾:

Linux_1.8.0.12/generic/x86_64 在命令下運行以使「scli」可執行.

chmod +x scli

2. 檢查驅動器韌體版本 「sdb」是目標驅動器的裝置名稱。

./scli show /dev/sdb -a

[root@localhost x86_64]# ./scli show /dev/sdb -a
SanDisk scli version 1.8.0.12
Copyright (C) 2014 SanDisk
07/15/2020 15:41:10
Asset Information for /dev/sdb
Vendor : SanDisk
Product ID : LT1600M0
Revision Level : C405
Serial No : 42062372
Part Number : 193a
WWN LUN : 5001e8200281d224
WWN Target : 5001e8200281d225

Command Executed Successfully.

[jbod linux sandisk fw]

3. 檢查開機時間 確定要檢查的SSD後,可以鍵入以下命令(其中X是要檢查的驅動器號):

./scli show /dev/sdX -S 尋找「總開機小時數」。 [root@localhost x86 64]# ./scli show /dev/sda -S SanDisk scli version 1.8.0.12 Copyright (C) 2014 SanDisk 07/10/2020 19:53:30 Statistics Information for /dev/sda : 6 % Life Used Temperature : 41 Celsius Total Read : 275.83 TB Total Write : 580.95 TB Total Read Commands : 23791125744 Total Write Commands : 29664369071 Read Errors : 0 : 0 Program Events Background Read Events : 0 GList Count : 1 Lifetime Max Temperature : 71 Celsius Total Power on Hours : 6436

```
Command Executed Successfully.
```

[jbod linux sandisk]

Linux版SmartMonTools - RAID模式

 安裝 您需要安裝smartmontools和storcli utility來收集資料。轉到上表中發佈的下載連結,下 載並安裝smartmontools實用程式 獲取smartctl 安裝 通過以上鍊接獲得檔案Linux版本。解除 安裝 檔案。 smartmontools-7.1 按順序運行以下命令。

./configure make make install 現在轉到上表中發佈的下載連結,下載並安裝storcli實用程式。標識要檢查的驅動器,轉到 storcli目錄並鍵入命令:

storcli /c0/eall/sall show 查詢裝置ID(DID)。 裝置ID將是 未來步驟中需要的. [root@localhost smartctl]# storcli /c0/eall/sall show CLI Version = 007.0913.0000.0000 Jan 11, 2019 Operating system = Linux 3.10.0-957.el7.x86_64 Controller = 0 Status = Success Description = Show Drive Information Succeeded.

Drive Information :

 EID:Slt
 DID
 State DG
 Size Intf Med SED PI SeSz Model
 Sp Type

 252:1
 69
 Onln
 0 222.585 GB SATA SSD N
 N 512B SAMSUNG MZ7LM240HMHQ-00005 U

 252:4
 91
 JBOD
 - 372.611 GB SAS SSD N
 N 512B LT0400MO
 U

 252:5
 88
 JBOD
 - 1.455 TB SAS SSD N
 N 512B LT1600MO
 U

[raid linux smartmon fw 1]

2. 檢查驅動器韌體版本 以下命令中的「148」是目標驅動器的裝置ID(DID)。而「sdc」是其裝置 名稱。

smartctl -d megaraid,148 -i /dev/sdc [root@localhost -]# smartctl -d megaraid,148 -i /dev/sdc smartctl 6.5 2016-05-07 r4318 [x86_64-linux-3.10.0-957.el7.x86_64] (local build) Copyright (C) 2002-16, Bruce Allen, Christian Franke, www.smartmontools.org

== START OF INFORMATION SECTION === Vendor: SanDisk Product: LT0400MO Revision: C405 Compliance: SPC-4 User Capacity: 400,088,457,216 bytes [400 GB] Logical block size: 512 bytes LU is resource provisioned, LBPRZ=1 Rotation Rate: Solid State Device Form Factor: 2.5 inches Logical Unit id: 0x5001e82002841758 Serial number: 42211160 Device type: disk Transport protocol: SAS (SPL-3) Local Time is: Mon Feb 4 23:08:06 2019 CST SMART support is: Available - device has SMART capability. SMART support is: Enabled Temperature Warning: Disabled or Not Supported

[raid linux smartmon fw 2]

 . 檢查開機時間 一旦確定要檢查哪個SSD,則可以鍵入以下兩個命令以獲取所需的輸出(其中 X是 從步驟4獲得的裝置ID

注意:為了讓此操作生效,您需要確保並使用**megaraid**'使用RAID集時輸入命令。 否則就無 法使用。 smartctl -d megaraid,N -t short /dev/sdX - Wait 10 seconds before running the second command

smartctl -d megaraid,N -l selftest /dev/sdX

查詢「Lifetime」小時從1st 線路。 這將是PoH的最新記錄。

EID:	Slt DID	State	DG		51Z	e Intf	Med	SED	PI	SeSz	Model		Sp	Тур	2
252:	1 69	Onln	0	222.	585 G	B SATA	SSD	N	N	512B	SAMSUNG MZ	LM240HMHQ-0000	5 U		
252:	4 91	JBOD		372.	611 G	B SAS	SSD	N	Ν	512B	LT0400M0		U		
252:	5 88	JBOD	-	1.	455 T	B SAS	SSD	N	Ν	512B	LT1600M0		U	-	
EID= DHS= UBad Med= SeSz UGUn CFSh	Enclosur Dedicate =Unconfi Media Ty =Sector sp=Unsup ld=Confi	e Dev d Hot gured pe SE Size gured	ice Spa Bac D=Se Sp=S d UC shi	ID S re U Onl elf E spun Shld elde	lt=Sl Good= n=Onl ncryp U=Up =UnCo d Cpy	ot No. Unconf ine Of tive D D=Down nfigur bck=Co	fln= igur fln= T=T ed s pyBa	=Dev ed G Offl PI= rans hiel ck C	ice ood ine Pro iti ded BSh	ID D GHS=0 Intf tection on F=1 HSPS ld=Co	S=DriveGroup Slobal Hotsp Interface on Info Foreign Nd=Hotspare Syback Shie	bare shielded lded			
[roo smar	t@localh tctl 7.0	ost ~ 2018]# s -12-	mart 30 r	ctl - 4883	d mega [x86_6	raid 4-li	,88 nux-	-t 3.1	short 0.0-9	/dev/sdb 57.el7.x86_	54] (local buil	d)		
[roo smar Copy Shor Use [roo smar	t@localh tctl 7.0 right (C t Backgr smartctl t@localh tctl 7.0	ost ~ 2018 200 200 cound -X to 10st ~ 2018]# s -12- 2-18 Self o at]# s -12-	mart 30 r , Br Tes ort mart 30 r	ctl - 4883 uce A t has test ctl - 4883	d mega [x86_6 llen, begun d mega [x86 6	raid 4-li Chri raid 4-li	,88 nux- stia ,88 nux-	-t 3.1 n F -l 3.1	short 0.0-9 ranke selft 0.0-9	/dev/sdb 57.el7.x86_0 www.smart st /dev/sdb	54] (local buil nontools.org 54] (local buil	d)		
[roo smar Copy Shor Use [roo smar Copy	t@localh tctl 7.0 right (C t Backgr smartctl t@localh tctl 7.0 right (C	nost -) 2018) 200 round -X t nost ~) 2018) 200]# s -12-18 Self o at]# s -12-18	mart 30 r , Br Tes ort mart 30 r , Br	ctl - 4883 uce A t has test ctl - 4883 uce A	d mega [x86_6 llen, begun d mega [x86_6 llen,	raid 4-li Chri raid 4-li Chri	,88 nux- stia ,88 nux- stia	-t 3.1 n F -l 3.1 n F	short 0.0-9 ranke selft 0.0-9 ranke	/dev/sdb 57.el7.x86_0 www.smart est /dev/sdl 57.el7.x86_0 www.smart	54] (local buil nontools.org 54] (local buil nontools.org	d) d)		
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Long (extended) Self-test duration: 29600 seconds [493.3 minutes]

[raid linux smartmon]

附註:SmartMonTools在RAID for ESXi中不起作用。sg3_utils和Sandisk工具不能在所有作業系統的RAID中工作。