如何升级微码 DS3000 存储各部件微码

这部分描述了如何升级 DS3000 的固件。你可以在以下链接,下载最新的升级固件:

http://www-1.ibm.com/servers/storage/support/disk

附录 B: "IBM 支持网站"在第 563 页描述了网站和其内容。

在这个网页上可以浏览到所有最近更新的 DS3000 固件(控制器, ESM,磁盘, 和 NVSRAM), HBA 的设备驱动和固件,以及存储管理软件版本。

DS3000 的固件与存储管理软件的版本、HBA 的设备驱动固件是紧密相关的,并且也与你的主机相对应。需要去检查 DS3000 升级固件里的 readme 文档,确定是否需要主机安装一些必须的软件。如果你的机器没有最新的存储管理软件(包括多路径设备驱动)或者主机需要的 HBA 卡的软件,在进行 DS3000 固件升级前请务必先下载安装。无特殊说明的,建议您先把所有程序都更新到最新。

Firmware HBA Storage Mgr Support & pubs Controller current Controller previous ESM &	Tools HDD
IBM System Storage DS3000 Controller Firmware and NVSRAM	Current Version & Readmes
Important Please refer to README for important information before installing this version of controller firmware.	04 Dec 2007 <u>v06.70.22.00</u>
Subsystem Controller Firmware/NVSRAM	

升级固件需要一个维护窗口,所以您的存储柜需要计划停止服务。 从 IBM 的支持网站上下载所需要的升级包请存放到本地硬盘。

重要提示:在这部分介绍里面给了一个程序提供升级的指导。然而,这是可以改变的。在每次升级固件前一定要认真阅读 readme 文档,确保刷新程序配合的准确性。

升级主机

在升级 DS3000 的固件之前,你的服务器端所安装的软件应该更新到最新。 登录到 IBM 支持链接列表去查看是否有最新的存储管理软件和 HBA 驱动。如果 有,根据 readme 文档的说明升级它们。

如果需要,请也升级 HBA 驱动和存储管理软件。升级存储管理软件的介绍

图 13-16 DS3400 代码下载

在本书的第五章。"安装 IBM System Storage DS300 Storage Manager"在第 四部分的第 93 页。"简单配置"在第 351 页。存储管理软件中包含了多路径驱 动。当您的服务器安装了多块 HBA 卡后,更新此软件可以获得最新的多路径驱 动。

注意:升级主机服务器端的存储管理软件需要重启服务器系统,请计划您的荡机时间。

同样检查 HBA 卡固件,在连接上网页的列表中列出的固件应该是最新的。

升级存储系统

当已经升级了主机相关固件和驱动,你可以继续升级你的存储柜的固件,在 图 13-1 第 284 页,点击 Download Firmware >>将看到几个升级不同固件的选 项,如图 13-17.

提示: 在存储系统配置文件中列出了当前 DS3000 固件版本。点击每个单独项目的固件下载链接,图 13-17 也显示了当前每个组件的固件版本。



图 13-17 下载固件

这四个选项是:

- ◆ Download Controller Firmware: 包括存储控制器固件。
- ◆ Download Controller NVSRAM: NVSRAM 跟服务器主机的 BIOS 有点相似。这个控制器固件和 NVSRAM 的 关系最为密切—确认你下载的这两个固件微码是否匹配。
- ◆ Download Drive Firmware: 包括了物理硬盘的固件。
- ◆ Download Environmental (ESM) Card Firmware: 包括了扩展柜的固件。

注意:	"Download"这个链接意思是更新硬件的实际固件微码。	在开始这个操
作之前,	你必须确认你已经从 IBM 网站上下载了对应代码程序。	

在开始升级您的存储系统之前:

- 1. 确认存储系统状态为"正常"(看 9.1,"状态栏"在第 199 页)。如果状态不正常,在升级之前运行"Recovery Guru",诊断并修复这些问题。
- 2. 在固件升级之前,阅读 readme 文档检查是否适合你要升级的存储系统。
- 对于双控配置要多注意。双控的升级需要把两个控制器管理口都连接。只连接一个控制器是无法把微码同步给两个控制器。因此,两个控制器无论带内还是带外必须都处于上线并可用状态。如果是带内管理升级一个冗余配置路径,请确认在连接主机端已经安装了多路径驱动。

注意:查看控制器状态时,可以在企业窗口看到全部系统状态。如果存储系统状态是正常的,那么两个控制器也处于工作状态。进入存储系统配置的控制器选项。 列出了每个控制器的状态。如图 13-18 所示,在第 296 页。

🚺 Logical Drives 🛛 🗍 Drives	2 Drive Channels	Enclosures	Mappings	All
🗄 Summary	Controllers		G Arrays	
PROFILE FOR STORAGE SUBSYSTEM: DS3	400_Example_Configura	tion (6/19/07	9:32:07 AM)	-
CONTRACT ED C				
Number of controllers: 2				
Number of controllers: 2				
Controller in Enclosure 0	lot A			
concronier in Encrosure o, s	IUC A			
Status: Online				
Current configuration				
Firmware version:	06.17.30.08			
Appware version:	06.17.30.08			
Bootware version:	06.17.30.08			
NVSRAM version:	N1726D340R917V15			
Pending configuration				
Firmware version:	None			
Appware version:	None			
Bootware version:	None			
NVSRAM version:	None			
Transferred on:	None			
Replacement part number:	39R6502			
Board ID:	1932			
Submodel ID:	40			
Product ID:	1726-4xx FAStT			
Product revision:	0617			
Serial number:	SF65000175			
Date of manufacture:	December 23, 2006			
Cache	0.50 M			
Iotal data cache:	368 MB			
Processor cache:	144 MB			
HOST INTERIACE BOARD	0001			
Board ID:	Optimel			
Serial number.	operman			
Date of manufactures	Not available			
Date of Manaracture.	NOC AVAILABLE			
rait number.				

图 13-18 显示控制器状态

注意:

- ◆ 首先把 ESMs 固件升级,接下来升级 RAID 控制器。过时的 ESM 固件可能 在你升级 DS3000 存储之后导致你的扩展柜不可用或连接失败。
- ◆ 升级主机时,如果是冗余配置,那么要确认安装最新的多路径驱动。
- ◆ 先升级控制器固件,之后是 NVSRAM----这两个组件更新必须按照这个顺序。
- ◆ 你的电源或是网络/SAN/SAS 升级进行时中断可能导致配置文件损坏,因此, 在升级过程中,不要关闭 DS3000 存储柜的电源或者管理站。如果你使用 的是带内管理,并且有光纤网络或是管理网络,确认 SAN 链接设备在升级 过程供电正常。否则,这可能引起升级进程被中断和重复的初始化。

下载 ESM 卡固件

根据如下步骤:

1.升级 ESM 代码,点击 "Download (ESM) Card Firmware"(图 13-17 在 295 页)。图 13-19 窗口所示。

ect a firmware osystem DS340 Drive enclosur	file to transfer 00_crmsystem_ res	new firmware fr data.	om this manage	ement station to t	he selected en	vironmental (ESM)	cards on Storag
Enclosure ID	Maximum Data Rate	Card Card Manufacturer	Card A Firmware	Card A Product ID	Card B Firmware	Card B Product ID	Status
Enclosure 1	3 Gbps	IBM-ESXS	0166	PN 21204-03	0166	PN 21204-00	
ESM firmware Selected ESM	l firmware file i	nformation:				Sali	art File

图 13-19 下载环境 (ESM) 卡固件

2.这个窗口有部分。顶部框中是,*扩展机柜*,列出了所有扩展柜。你可以选择升级哪一个扩展柜。点击"Select All"可以升级所有的扩展柜。

在第二部分, *ESM 固件*,选择从 IBM 支持网页上提前下载的 ESM 固件文件。点击 "Select File"并选择固件文件。

点击"Start"来升级 ESM 固件(图 13-20)。

	en ennemente	I (ESM) Card I	irmware				
IBM.							
ect a firmware osystem DS340 Drive enclosur	file to transfer 10_crmsystem_ es	new firmware fr data.	om this manage	ement station to t	he selected en	vironmental (ESM)	cards on Storag
Select enclosur	res: 🔽 Select	All					
Enclosure ID	Maximum Data Rate	Card Manufacturer	Card A Firmware	Card A Product ID	Card B Firmware	Card B Product ID	Status
Enclosure 1	3 Gbps	IBM-ESXS	0166	PN 21204-03	0166	PN 21204-00	
ESM firmware Selected ESM X:\Code\ESM	1 firmware file i /\1.66 - 2007-0	nformation: 2-09\ibm_ds3kes	m_1.66\EXP30	00\esm0166.esm	1	Sele	ct File

图 13-20 下载环境 (ESM) 卡固件-Start

3.弹出"Confirm Download"窗口,阅读警告信息后,确认在空白框输入"yes", 点击"OK",开始升级。(图 13-21)

🚟 Confir	m Do	wnload 🛛 🔀
IB	K.	
<u>^</u>	You to the DS34 Cauti your	have selected to transfer firmware file esm0166.esm e selected drive enclosures on Storage Subsystem IO0_crmsystem_data. on: Perform this task ONLY under the guidance of customer support representative.
Туре	"yes"	to confirm that you want to perform this operation:
		OK Cancel

图 13-21 确认下载

4.在选择扩展机柜的状态一栏,可以看到当升级过程中会有从"等待"到"下载中"的状态改变。可以监视进程和组件的下载状态。

下载 RAID 控制器模块固件

1.升级控制器固件,点击 "**Download Controller Firmware**" (从图 13-17 在 第 295 页)。如窗口图 13-22 所示。

Download Controller Firmware	\mathbf{X}
Select a firmware file to transfer new controller firmware from this manage Subsystem DS3400_crmsystem_data.	ement station to Storage
Controller Firmware	
Current controller firmware version: PkgInfo 06.17.31.00	
Selected controller firmware file:	
	Select File
File information:	
Transfer NVSRAM file with controller firmware	
Current NVSRAM version: N1726D340R917V15	
Selected NVSRAM file:	
	Select File
File information:	
Transter Cancel Help	

图 13-22 下载 RAID 控制器模块固件

2.这个窗口也包含了两部分。第一部分,RAID 控制器模块固件,有 RAID 控制器模块固件升级选择栏。如之前提过的,你必须先升级 RAID 控制器模块固件,再升级 NVSRAM。第二部分,NVSRAM,在升级 RAID 控制器模块固件之后,选择文件升级 NVSRAM。

3.点击"Select File"在 RAID 控制器模块固件部分,选择升级文件(图 13-23)

Download Controller Firmware	X
Select a firmware file to transfer new controller firmware from this manageme Subsystem DS3400_crmsystem_data.	ent station to Storage
Controller Firmware	
Current controller firmware version: PkgInfo 06.17.31.00	
Selected controller firmware file:	
X:\Code\FVWFVV_DS3400_06173100.dlp	Select File
File information:	
Firmware=06.17.31.00	
NVSRAM Transfer NVSRAM file with controller firmware Current NVSRAM version: N1726D340R917V15	
Selected NVSRAM file:	
	Select File
File information:	
Transfer Cancel Help	

图 13-23 下载 RAID 控制器固件----选择控制器文件

4.升级 NVSRAM 同样的步骤,把"Transfer NVSRAM file with controller firmware"复选框打上"对勾"之后选择 NVSRAM 文件(图 13-24)

🔠 Download Controller Firmware
Select a firmware file to transfer new controller firmware from this management station to Storage Subsystem DS3400_crmsystem_data.
Controller Firmware
Current controller firmware version: PkgInfo 06.17.30.08
Selected controller firmware file:
er_Code_06173100\FIRMWARE\DS3400\FVV_DS3400_06173100.dlp Select File
File information:
Firmware=06.17.31.00
NVSRAM
✓ Transfer NVSRAM file with controller firmware
Current NVSRAM version: N1726D340R917V15
Selected NVSRAM file:
File information: No displayable attributes associated with this file.
Transfer Cancel Help

图 13-24 下载 RAID 控制器固件----关于 NVSRAM 固件

5.点击"Transfer"给存储系统提交新微码。弹出确认窗口(图 13-25)。点击"yes"继续升级操作。

🛗 Confir	m Download 🛛 🛛 🔀
IB	
	You have elected to transfer firmware file FW_DS3400_06173100.dlp and NVSRAM file N1726D340R917V15.dlp to Storage Subsystem DS3400_crmsystem_data. Important: Check your documentation to ensure that your NVSRAM file is compatible with your current firmware version. If you customized any settings on the current NVSRAM file residing on the controller, you may need to re-apply those settings to the new file after the download is complete. This operation may take a long time to complete and you cannot cancel it after it starts. Please verify that either 1) The storage subsystem is not receiving I/O or 2) there is a multi-path driver (such as RDAC) installed on all hosts using this storage subsystem. Are you sure you want to continue?
	Yes No

图 13-25 确认下载

6.编码将被传输到存储系统和所有安装在线的 RAID 控制器模块。这个过程将持续一些时间-----你可以在窗口中监视下载状态。(图 13-26)

📓 Downloadin	ng	×
IBM.		
	Note: There may be a slight delay while transferring the first or last portion of the file.	
	Transferring 294,912 of 7,646,788 bytes	
	Controller activation pending	
	Controller activation pending	
	Close	

图 13-26 下载

7.当每个任务都完成后,图 13-27,点击"Close"返回下载固件

🔛 Downloadir	Ig	X
IBM.		
	Note: There may be a slight delay while transferring the first or last portion of the file.	
	Transferred	
Ľ	Controller activated	
	Controller activated	
Download	l successful.	
	Close	

图 13-27 下载成功

下载 RAID 控制器模块 NVSRAM

根据以下步骤:

1.下载最新版本的 NVSRAM 文件,点击 Download Controller NVSRAM(图 13-17 在第 295 页)弹出当期窗口(图 13-28)。点击 "Select File"来选择一个新的 NVSRAM 文件。

📓 Download Controller NVSRAM
Select an NVSRAM file to transfer new NVSRAM from this management station to Storage Subsystem DS3400_crmsystem_data.
NVSRAM Current controller firmware version: PkgInfo 06.17.31.00 Current NVSRAM version: N1726D340R917V15 Selected NVSRAM file:
J6173100/NV/SRAM/DS3400_DualController/N1726D340R917V15.dlp Select File File information: No displayable attributes associated with this file.
Transfer Cancel Help

图 13-28 下载 RAID 控制器模块 NVSRAM

2.点击"Transfer"向存储系统提交这个新 NVSRAM 文件。弹出 Confirm Download 窗口(图 13-29)。阅读信息并点击"yes"继续。

🛗 Confir	rm Download 🛛 🔀
IB	
(You have elected to transfer NVSRAM file N1726D340R917V15.dlp to Storage Subsystem DS3400_crmsystem_data. Important: Check your documentation to ensure that the NVSRAM file is compatible with the current firmware version. If you customized any settings on the current NVSRAM file residing on the controller, you may need to re-apply those settings to the new file after the download is complete. This operation may take a long time to complete and you cannot cancel it after it starts. Please verify that either 1) The storage subsystem is not receiving I/O or 2) there is a multi-path driver (such as RDAC) installed on all hosts using this storage subsystem. Are you sure you want to continue?
	Yes No

图 13-2 确认 NVSRAM 下载

3.出现 Downloading 界面,显示控制器当前传输和执行状态。看图(13-30)

📓 Downloadin	ng	X
IBM.		
	Note: There may be a slight delay while transferring the first or last portion of the file.	
	Transferred	
B	Controller activated	
01 0 €	Activating controller Elapsed time: 00:01 (maximum time = 15 minutes)	
	Close	

图 13-30 NVSRAM 下载进程

4.在文件传输完毕激活成功后(图 13-31),点击"关闭"返回到固件下载界面。 (图 13-17 在第 295 页)。

🔚 Downloadin	Ig	×
IBM.		
	Note: There may be a slight delay while transferring the first or last portion of the file.	
	Transferred	
™ ⊻	Controller activated	
™	Controller activated	
Download	l successful.	
	Close	

图 13-31 NVSRAM 下载成功

下载物理驱动器固件

根据以下步骤:

1.点击"Download Drive Firmware"来更新物理硬盘的固件。你可以选择固件 镜像来安装,如图 13-32 所示。点击"Add"并选择物理驱动器的固件镜像。

	Download Dr	ive Firmware - Select Packages	×
	IBM.		
Se ma	elect the drive f ay select up to	irmware packages you would like to transfer. If you have more four packages to transfer at a time.	than one type of drive (vendor and capacity), you
Γ	Current drive fi	rmware package information	
	Drive product	IDs and firmware versions: BBA146C3ESTT0Z N(BH0G), BBAI	036C3ESTT0Z N(BH0D), ST3146854SS(BA18)
	Selected packs	iges	
	Packages to	be transferred:	
			Add
			Remove
) Deekege in	formation	
	Drive v	endor:	
	Drive p	roduct ID:	
	Propos Compa	ed firmware: tible firmware:	
			Next > Cancel Help

图 13-32 下载硬盘驱动器固件

2.选择物理驱动器固件包(图 13-33)



图 13-33 选择物理驱动器固件包

3.点击"确定"选择好固件文件并返回下载固件窗口(图 13-34)

Bownload Drive Firmware - Select Packages	×
Select the drive firmware packages you would like to transfer. If you have more than one type of drive (vendor a may select up to four packages to transfer at a time. Current drive firmware package information Drive product IDs and firmware versions: BBA146C3ESTT0Z N(BH0G), BBA036C3ESTT0Z N(BH0D), ST3146	and capacity), you 5854SS(BA18)
Selected packages	
Packages to be transferred:	
BBA146C3ESTT0Z_BH0G	Add Remove
Package information: Drive vendor: Drive product ID: Proposed firmware: Compatible firmware:	
Next > Ca	ancel Help

图 13-34 驱动器镜像添加

4.重复上述步骤升级你所要升级的每个物理驱动器类型----你可以一次升级四种物理驱动器类型----并点击"Next"。

5.选择你存储系统中所要升级的物理驱动器(图 13-35).在多选框中勾上"Select all",可以升级所有可用的物理驱动器。

		mware - S	Select D	rives						
IBM.										
e following nware on o s time.	tables displa ne or multiple	y drives that ∋ drives, eve	t are comp n if they a	patible and in are not at the	ncompatible wi e same initial fi	th the packa rmvvare leve	ges you se I. Select th	elected. You e drives you	ı may update th u wish to upda	ne te af
portant: Y	'ou must stop) all I/O and u	unmount a	ny file syste	em on all logica	l drives acce	essing the	selected dri	ves before sta	rting
transfer pr	rocess.									
elected firm	nware packa	iges								
Drive prod	luct IDs and f	irmware ver	rsions: BB	A146C3ES1	TOZ N(BHOG)	GNA073C3	ESTTOZ NO	BH0G)		
Diric pica			olorito. DD					0.100)		
Compati	ble Drives	Incompatible	Drives							
Company		ncompatible	Drives							
Select drive		ot all								
Select unve	53. 💌 DEIE	CL CIE								
Vendor	Product ID	Enclosure	Slot	Туре	Current fi	. Proposed	. Status	Array	Mode	
Vendor IBM-ESXS	Product ID GNA073	Enclosure 0	Slot 4	Type SAS	Current fi BH0G	. Proposed BH0G	. Status Optimal	Array 4	Mode Assigned	~
Vendor IBM-ESXS IBM-ESXS	Product ID GNA073 GNA073	Enclosure 0 0	Slot 4 12	Type SAS SAS	Current fi BH0G BH0G	. Proposed BH0G BH0G	. Status Optimal Optimal	Array 4 4	Mode Assigned Assigned	^
Vendor IBM-ESXS IBM-ESXS IBM-ESXS	Product ID GNA073 GNA073 BBA146	Enclosure 0 0 0	Slot 4 12 10	Type SAS SAS SAS	Current fi BH0G BH0G BH0G	. Proposed BH0G BH0G BH0G	. Status Optimal Optimal Optimal	Array 4 4	Mode Assigned Assigned Unassign	^
Vendor IBM-ESXS IBM-ESXS IBM-ESXS	Product ID GNA073 GNA073 BBA146 BBA146	Enclosure 0 0 0 0	Slot 4 12 10 11	Type SAS SAS SAS SAS	Current fi BH0G BH0G BH0G BH0G BH0G	. Proposed BH0G BH0G BH0G BH0G	. Status Optimal Optimal Optimal Optimal	Array 4 4 2	Mode Assigned Assigned Unassign Assigned	^
Vendor IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS	Product ID GNA073 BBA146 BBA146 BBA146	Enclosure 0 0 0 0 0	Slot 4 12 10 11 8	Type SAS SAS SAS SAS SAS	Current fi BH0G BH0G BH0G BH0G BH0G BH0G	Proposed BH0G BH0G BH0G BH0G BH0G BH0G	Status Optimal Optimal Optimal Optimal Optimal	Array 4 4 2 2	Mode Assigned Assigned Unassign Assigned Assigned	
Vendor IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS	Product ID GNA073 BBA146 BBA146 BBA146 BBA146	Enclosure 0 0 0 0 0 0 0	Slot 4 12 10 11 8 6	Type SAS SAS SAS SAS SAS SAS	Current fi BH0G BH0G BH0G BH0G BH0G BH0G BH0G	Proposed BH0G BH0G BH0G BH0G BH0G BH0G BH0G	Status Optimal Optimal Optimal Optimal Optimal Optimal	Array 4 4 2 2 2 2	Mode Assigned Assigned Unassign Assigned Assigned Assigned	
Vendor IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS	Product ID GNA073 GNA073 BBA146 BBA146 BBA146 BBA146	Enclosure 0 0 0 0 0 0	Slot 4 12 10 11 8 6	Type SAS SAS SAS SAS SAS SAS	Current fi BH0G BH0G BH0G BH0G BH0G BH0G BH0G	Proposed BH0G BH0G BH0G BH0G BH0G BH0G BH0G	Status Optimal Optimal Optimal Optimal Optimal	Array 4 4 2 2 2 2	Mode Assigned Assigned Unassign Assigned Assigned	
Vendor IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS Selected/av	Product ID GNA073 GNA073 BBA146 BBA146 BBA146 BBA146	Enclosure 0 0 0 0 0 0 0 0 0 5: 8/8	Slot 4 12 10 11 8 6	Type SAS SAS SAS SAS SAS SAS	Current fi BH0G BH0G BH0G BH0G BH0G BH0G BH0G	Proposed BHOG BHOG BHOG BHOG BHOG BHOG BHOG	Status Optimal Optimal Optimal Optimal Optimal	Array 4 4 2 2 2	Mode Assigned Assigned Unassign Assigned Assigned	< III >
Vendor IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS Selected/av	Product ID GNA073 GNA073 BBA146 BBA146 BBA146 BBA146 vailable drive	Enclosure 0 0 0 0 0 0 0 0 0 0 5; 8/8	Slot 4 12 10 11 8 6	Type SAS SAS SAS SAS SAS SAS	Current fi BH0G BH0G BH0G BH0G BH0G BH0G BH0G	Proposed BH0G BH0G BH0G BH0G BH0G BH0G BH0G	Status Optimal Optimal Optimal Optimal Optimal	Array 4 2 2 2	Mode Assigned Assigned Unassign Assigned Assigned	< III >
Vendor IBM-ESXS IBM-ESXS IBM-ESXS IBM-ESXS Selected/av	Product ID GNA073 GNA073 BBA146 BBA146 BBA146 BBA146 vailable drive	Enclosure 0 0 0 0 0 0 0 0 0 5: 8/8	Slot 4 12 10 11 8 8	Type SAS SAS SAS SAS SAS SAS	Current fi BH0G BH0G BH0G BH0G BH0G BH0G	Proposed BH0G BH0G BH0G BH0G BH0G BH0G	Status Optimal Optimal Optimal Optimal Optimal	Array 4 2 2 2	Mode Assigned Assigned Unassign Assigned Assigned	< III >

图 13-35 能被升级匹配的物理驱动器

6.在"Incompatible Drives"(图 13-36)选项卡中列出所有不能被升级的物理 驱动器。这些属于其他物理驱动器类型,你需要选择其他固件升级包来升级。

Download Drive Firmware - Select Drives											
IBM.											
The following t firmware on or this time. Important: Yo the transfer prive Selected firm Drive produ	The following tables display drives that are compatible and incompatible with the packages you selected. You may update the firmware on one or multiple drives, even if they are not at the same initial firmware level. Select the drives you wish to update at this time. Important: You must stop all I/O and unmount any file system on all logical drives accessing the selected drives before starting the transfer process. Selected firmware packages Drive product IDs and firmware versions: BBA146C3ESTI07 N(BH0G), GNA073C3ESTI07 N(BH0G)										
Compatik	ole Drives In	compatible I	Drives								
Vendor	Product ID	Enclosure	Slot	Type	Current fi	Proposed	Status	Array	Mode		
IBM-ESXS	BBA146C	0	9	SAS	BH0G	 Bytesseet2	Optimal	3	Assigned		
IBM-ESXS	BBA036C	0	7	SAS	BHOD		Optimal		Unassign		
IBM-ESXS	ST31468	0	5	SAS	BA18		Optimal	2	Assigned		
IBM-ESXS	ST31468	0	1	SAS	BA18		Optimal		Hot spare		
						< Back	Finish.	Can	icel Help		

图 13-36 不匹配类型的物理驱动器

7.点击"Finish"升级物理驱动器固件。会弹出一个确认窗口(图 13-37)。在 空白框中键入"yes"点击"OK"开始升级。

🛗 Confirm Download 🛛 🔀							
IBM.							
VVarr drive loss. prote copy	ning: Improperly updated drive firmware may result in performance issues, drive unavailability and/or data Please exercise precautionary methods for cting your data such as tape backup or logical drive						
Type "yes" to confirm that you want to perform this operation: yes							
(OK Cancel Help						

图 13-37 确认下载

8.图 13-38 显示下载进程。

🛗 Downloa	ad Drive Firmv	vare - Progress					×
IBM							
	-•						
Drives upda	ted:						
Vendor	Product ID En	closure Slot	Туре	Proposed	d Array	Status	Progress
IBM-ESXS	BBA146C 0	10	SAS	BHOG		Optimal	In progress
IBM-ESXS	BBA146C 0	11	SAS	BH0G	2	Optimal	In progress
IBM-ESXS	BBA146C 0	8	SAS	BH0G	2	Optimal	In progress
IBM-ESXS	BBA146C 0	6	SAS	BH0G	2	Optimal	In progress
IBM-ESXS	BBA146C 0	3	SAS	BH0G	1	Optimal	In progress
IBM-ESXS	BBA146C 0	2	SAS	BH0G	1	Optimal	In progress
IBM-ESXS	GNA073C 0	4	SAS	BH0G	4	Optimal	Successful
IBM-ESXS	GNA073C 0	12	SAS	BH0G	4	Optimal	Successful
Progress	summary						
		1					
Scheduled	In progress	Failed-partial	Failed-invalid	Failed-of	ther Not a	attempted Su	uccessful
8	6	0	state 0	0	0	2	
	Transf	er More	top Save	As	Close	Help	

图 13-38 显示下载进程

9.升级完成后会显示摘要(图 13-39)。如果你想升级更多物理驱动器,点击 "Transfer More",否则点击 "Close"退出物理驱动器固件升级窗口。

🔠 Downl	oad Drive Firmwar	e - Progress					×
13	12.						
Drives upo	dated:						
Vendor	Product ID Enclos	sure Slot	Туре	Proposed	d Array	Status	Progress
IBM-ESXS	BBA146C 0	10	SAS	BH0G		Optimal	Successful
IBM-ESXS	BBA146C 0	11	SAS	BH0G	2	Optimal	Successful
IBM-ESXS	BBA146C 0	8	SAS	BH0G	2	Optimal	Successful
IBM-ESXS	BBA146C 0	6	SAS	BH0G	2	Optimal	Successful
IBM-ESXS	BBA146C 0	3	SAS	BH0G	1	Optimal	Successful
IBM-ESXS	BBA146C 0	2	SAS	BH0G	1	Optimal	Successful
IBM-ESXS	GNA073C 0	4	SAS	BH0G	4	Optimal	Successful
IBM-ESXS	GNA073C 0	12	SAS	BH0G	4	Optimal	Successful
Progress	s summary						
Schedule	d In progress	Failed-partial	Failed-invalid	Failed-of	ther Notat	tempted Su	Iccessful
8	0	0	state	0	0	8	
		1.0	0				
	Transfer M	Nore S	top Save	As	Close	Help	

图 13-39 物理驱动器固件升级完成