

Dell™ PowerVault™ 660F and 224F Systems

# Information Update



## ***Notes, Notices, Cautions, and Warnings***

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, notices, cautions, and warnings, and they are used as follows:



*NOTE: A NOTE indicates important information that helps you make better use of your computer system.*

**NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.**



**CAUTION: A CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**



**WARNING: A WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious bodily injury.**

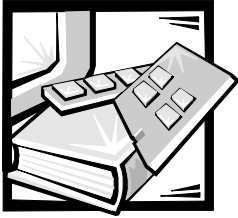
---

**Information in this document is subject to change without notice.  
© 2001 Dell Computer Corporation. All rights reserved.**

Reproduction in any manner whatsoever without the written permission of Dell Computer Corporation is strictly forbidden.

Trademarks used in this text: *Dell*, the *DELL* logo, *Dell OpenManage*, *PowerEdge*, and *PowerVault* are trademarks of Dell Computer Corporation; *Microsoft* is a registered trademark of Microsoft Corporation.

Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell Computer Corporation disclaims any proprietary interest in trademarks and trade names other than its own.



# **Dell™ PowerVault™ 660F and 224F Systems Information Update**

This document provides additional information to the *Dell PowerVault 660F and 224F Storage Systems User's Guide* and the *Dell PowerVault 660F and 224F Storage Systems Installation and Troubleshooting Guide*. This update includes corrections to dual-active configuration requirements, virtual disks, spanning drive groups, regulatory information, and additional information about the system indicators.

## **Dual-Active Configuration**

This section updates the "Dual-Active Configuration" section of the "Host/Controller Configuration" chapter in the *Dell PowerVault 660F and 224F Storage Systems Installation and Troubleshooting Guide*.

Dual-active mode (often called active-active) refers to a two-controller configuration in a single subsystem. Dual-active configurations use two Dell Fibre redundant array of independent disks (RAID) controllers connected in such a way as to allow each controller to provide cache protection. In dual-active topologies, or dual-active mode, both controllers are actively processing data. This mode improves overall system performance. Figure 1 illustrates a dual-active configuration with two servers directly connected to the two controllers.

Hardware requirements for a dual-active controller configuration are as follows:

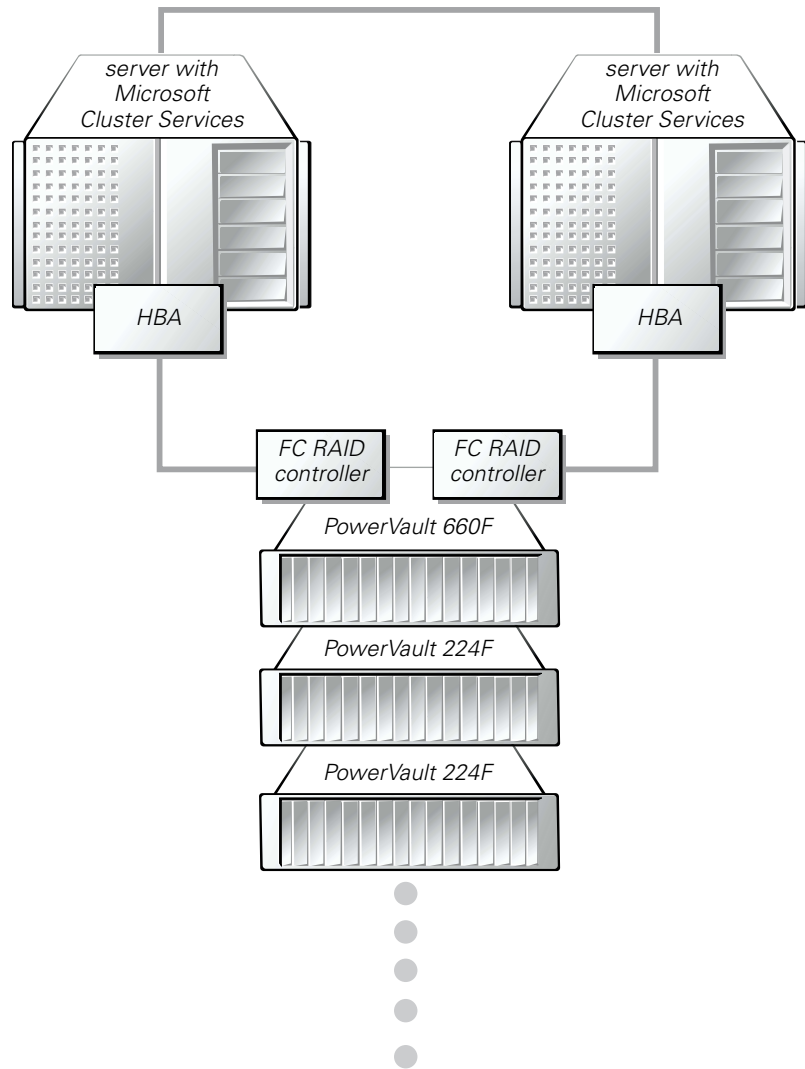
- Both controllers must have the same amount of cache memory.
- Both controllers must use the same firmware type and revision level.

Supported dual-active controller configurations are as follows:

- When you connect two or more PowerEdge™ systems to the PowerVault 660F in a storage area network (that is, through a PowerVault Fibre Channel 5xF switch), the 660F is fully capable of dual-active operation.
- With two PowerEdge systems directly connected as shown in Figure 1, both servers must have Microsoft® Cluster Services (MSCS) installed. For information about using MSCS with PowerEdge systems, see your Cluster documentation.



NOTE: Dell PowerEdge clusters do not support inclusion of non-Dell servers when using MSCS.



**Figure 1. Dual-Active Configuration With Two Servers Directly Connected to FC RAID Controllers**

## **Virtual Disks**

This section updates the "Virtual Disks" subsection of the "Drive Functions" section in the "Dell Fibre Disk RAID Controller Functions" chapter of the *Dell PowerVault 660F and 224F Storage Systems Installation and Troubleshooting Guide*.

Virtual disks are the logical devices (storage volumes) that are presented to the operating system. During the configuration process, after disk groups are defined, one or more virtual disks must be created from the disk group. Virtual disks have the following properties:

- More than one virtual disk can be defined on a single disk group.
- The minimum size of a virtual disk is 8 megabytes (MB). The maximum size is theoretically 2 terabytes (TB).
- Up to 32 virtual disks can be created.
- Each virtual disk has a RAID level which is selectable (subject to the number of virtual disks in the disk group).
- Each virtual disk has its own write policy (write-back or write-through).
- Each virtual disk has its own affinity or logical unit number (LUN) mapping.
- Virtual disks must be deleted in the reverse order that they were created. In other words, you can only delete the last virtual disk that was created.

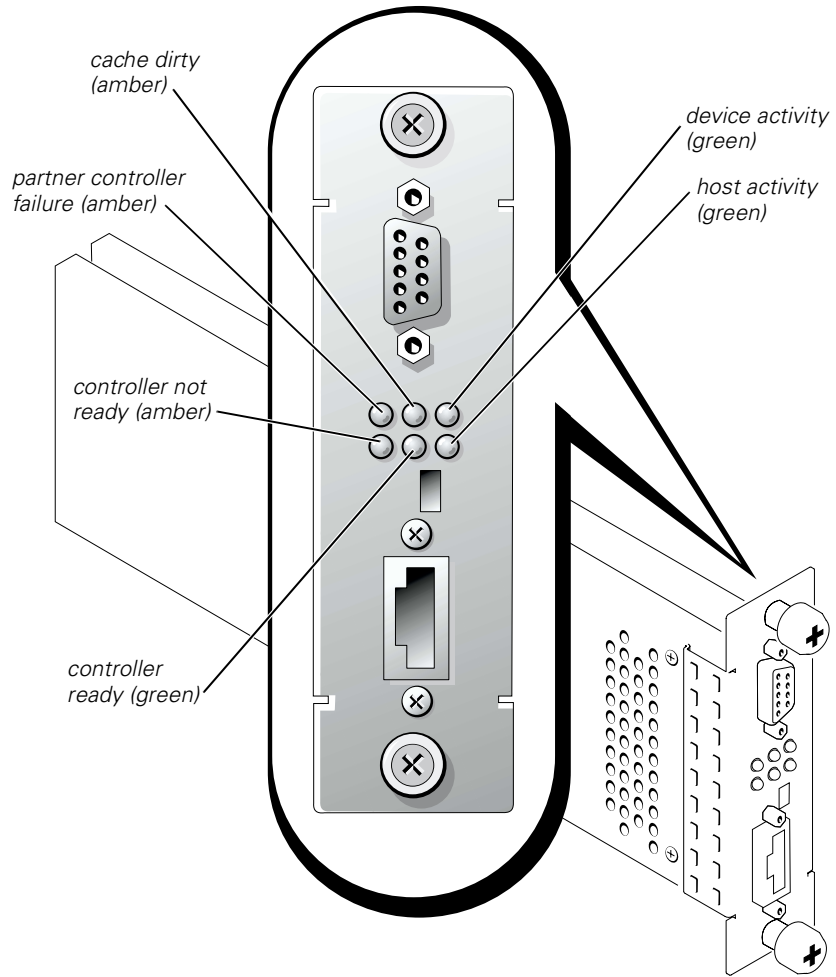
## **Spanning and Striping Disk Groups**

This section updates the "Spanning Disk Groups" subsection of the "Drive Functions" section in the "Dell Fibre Disk RAID Controller Functions" chapter of the *Dell PowerVault 660F and 224F Storage Systems Installation and Troubleshooting Guide*.

Using Dell OpenManage™ Array Manager, you can span or stripe multiple LUNs in a PowerVault 660F into a single volume as seen by the operating system. The functions are controlled by the Array Manager software, not by the PowerVault 660F hardware. See the *Dell OpenManage Array Manager User's Guide* for details.

## **Fibre Disk RAID Controller LED Indicators**

This section updates the "LED Indicators" subsection of the "Back Panel Features" section in the "Dell PowerVault 660F and 224F Storage Systems" chapter of the *Dell PowerVault 660F and 224F Storage Systems User's Guide*.



LED	Description	Color	Indication
1	Controller failure (from partner)	Amber	Lights if the partner RAID controller in a dual-controller configuration detects that the primary controller has failed.
2	Cache dirty	Amber	Lights if data exists in the controller's cache that has not yet been written to disk.
3	Host activity	Green	Lights if activity takes place on the host fibre port.
4	Controller not ready	Amber	Lights if the RAID controller is not ready.

<b>LED</b>	<b>Description</b>	<b>Color</b>	<b>Indication</b>
5	Controller ready	Green	Lights when the RAID controller is ready.
6	Device activity	Green	Lights if activity takes place on either of the device channel fibre ports.

## **NOM Information (Mexico Only)**

This section updates the "NOM Information (Mexico Only)" section of the "Regulatory Notes" appendix of the *Dell PowerVault 660F and 224F Storage Systems User's Guide*, in compliance with the requirements of official Mexican standards (NOM).

Exporter: Dell Computer Corporation  
One Dell Way  
Round Rock, TX 78682

Importer: Dell Computer de México,  
S.A. de C.V.  
Paseo de la Reforma 2620 - 11°  
Piso Col. Lomas Altas  
11950 México, D.F.

Ship to: Dell Computer de México,  
S.A. de C.V. al Cuidado  
de Kuehne & Nagel de  
México S. de R.L.  
Avenida Soles No. 55  
Col. Peñon de los Baños  
15520 México, D.F.

Supply voltage: 100–240 VAC

Frequency: 50/60Hz

Input current rating: AVM—10.0 - 5.0A

