

Industry Standard
Servers
Server Storage and
Infrastructure Group

An Executive
White Paper

June 2003
Doc. no. 5981-8700EN



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Why Buy HP Server and Storage Hard Drives?

Introduction

In today's distributed enterprise with larger, more complex applications than ever before, an increase of mission-critical data moving to the server, and continued server consolidation, storage has become more important than ever. HP delivers the highest quality products to ensure the integrity and availability of data. A major component of this process is HP's commitment to deliver the highest quality hard drives in the industry.

So Why Buy HP Hard Drives?

Qualification Process. HP drives are NOT the same as their OEM equivalent. HP has set up an industry-recognized qualification process unmatched in the industry with four teams dedicated to testing drives in real-life and extreme environments:

1. **Selection Evaluation Team**
2. **Development Validation Team**
3. **Supplier Production Qualification Team**
4. **Continuous Improvement/Performance Monitoring Team**

Not only does HP test for data and signal integrity and physical defects, but we also audit supplier processes and put drives through real-life situations to see how they cope with the differences of various operating systems. The HP system compatibility aspects of an HDD product are validated through a series of test sequences defined by a set of matrices that describe representative configurations, including both HP legacy and new storage applications. Typically, **more than 2,000** unique HDDs are used to evaluate a product family during the Development Validation phase, and approximately **2 million** drive test hours occur during each family qualification.

Closed-Loop Quality System. HP's closed-loop quality system includes multiple quality controls and monitoring systems. These quality controls and monitoring systems ensure the product meets hp's quality and reliability requirements. The controls will alert hp and the HDD Supplier to any "out of control" conditions and quality issues, allowing HP to contain nonconforming product and implement corrective actions prior to shipment of nonconforming product to customers.

Integration. Many issues customers have with third party hard drives have to do with "simple" integration concerns. All HP hard drives ship with the correct cables, SCSI ID settings, termination schemes, and documentation for HP servers. When buying from another supplier, there is no guarantee that these drives have been set properly from their generic default settings to ensure proper operation with HP servers.

HP has developed strong long-term working relationships with all of its HDD suppliers. HP engages with HDD suppliers in researching new technologies, product requirements, long-range product roadmaps, new features, and defining requirements for product designs. HP also works with HDD suppliers 2 to 3 years in advance of product availability to ensure technology feasibility and successful system integration.

Firmware. High performance drives include a firmware-based feature named "Tagged Command Queuing", which improves performance and dramatically increases the complexity of drive operations, making the firmware similar to a multi-tasking operating system. There are an enormous number of timing sequences that need to be tested to ensure that the drive firmware design is "bullet proof" with amendments made accordingly. Only HP drives have firmware tested and optimized for HP systems.

Pre-Failure Warranty. Insight Manager 7 leverages technology embedded in Smart drives to detect anomalies in drive operation. When a drive performs outside an accepted parameter, the HP Insight Manager Agents send an event to Insight Manager 7. Under HP's exclusive Pre-Failure Warranty, the drive can then be replaced at HP's expense. This feature allows Systems Administrators to proactively schedule downtime for maintenance without interruption to business critical operations.

With a combination of hot-pluggable drives and a Smart Array Controller, the faulty drive can be replaced without any downtime. Only HP drives can be monitored by the health log and benefit from this warranty. Note of caution: The HP warranty may be invalidated when HP products have been damaged or rendered defective by the installation or use of third-party parts.

Range. HP offers a host of server drive options to meet every customer need. The options come in 18.2GB SCSI drives up to 146.8GB SCSI drives and up to 80GB ATA hard drives. Drives come in Ultra 320 1" form factors.

Price Competitiveness. HP monitors the drive market on an on-going basis to ensure that our drives are price competitive with all competitors and to offer superior price/performance and the lowest total cost of ownership (TCO).

Customer Testimonial

HP delivers the highest quality and widest range of drives to ensure the integrity and availability of customer data. Just let some Seagate customers tell how confident they are with HP Storage Solutions:

In an article published by Seagate, the company touts the merits of HP hard drives and why they chose HP to adopt their flagship enterprise drive:

HP First To Offer Seagate's Cheetah 15K.3 Disc Drives In Ultra320 SCSI Server and Storage Solutions



Seagate Technology announced in December 2002 that its third-generation, award-winning Cheetah 15K.3 disc drive was qualified and adopted for industry-standard HP ProLiant servers and HP StorageWorks solutions. The Cheetah 15K.3 disc drive, Seagate's flagship enterprise drive, offers high performance and IOPS (input/output operations per second) with unmatched reliability that comes with being the world's only third-generation 15K disc drive. HP 146GB 10K U320 and 72GB 15K U320 Universal Hard Drives for the HP ProLiant servers and HP StorageWorks product families will utilize the Ultra320 SCSI Cheetah 15K.3 - the first enterprise products in the industry to do so - to meet the demands of data-intensive online transaction processing for enterprise environments.¹

"HP continues to enhance its leading server and storage solutions to enable customers to keep up with the information demands of today and tomorrow and Seagate is aligned with that same customer-centric focus."

- Brian Dexheimer, Seagate executive vice president, Worldwide Sales, Marketing and Customer Service²

"Seagate delivers some of the highest-performing and largest-capacity drives in the industry, which, when combined with HP's high-availability storage solutions, enable us to provide best-in-class performance for our enterprise storage customers."³

-Neal Clapper, general manager of HP's Modular Storage Organization

The Bottom Line

Simply put, HP guarantees that you will not find a higher quality drive anywhere.

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Doc. No. 5981-8700EN

¹ <http://www.seagate.com/cda/newsinfo/newsroom/releases/article/0,1121,1586^3,00.html>

² <http://www.seagate.com/cda/newsinfo/newsroom/releases/article/0,1121,1654^4,00.html>

³ <http://www.seagate.com/cda/newsinfo/newsroom/releases/article/0,1121,369^3^1,00.html>

Appendix A

Server Hard Drive Compatibility

HDD Speed	SCSI							ATA	
	10K				15K			40GB	80GB
	36.4GB NHP	36.4GB HP	72.8GB HP	146.8GB HP	18.2GB HP	36.4GB HP	72.8GB HP		
HDD Capacity	271832-B21	286713-B22 3R-A3838-AA	286714-B22 3R-A3839-AA	286716-B22 3R-A3841-AA	286775-B22 3R-A3848-AA	286776-B22 3R-A3849-AA	286778-B22 3R-A3851-AA	278424-B21	230534-B21
Part Number									
TC2100									
TC2110									
TC2120	X							X	X
CL380									
ML310	X	X	X	X	X	X	X	X	X
ML330			X						
ML330e									
ML330 G2	X	X	X	X	X	X	X	X	X
ML330 G3	X	X	X	X	X	X	X		
ML350									
ML350 G2		X	X	X	X	X	X		
ML350 G3	X	X	X	X	X	X	X		
ML370									
ML370 G2	X	X	X	X	X	X	X		
ML370 G3		X	X	X	X	X	X		
ML530									
ML530 G2		X	X	X	X	X	X		
ML570									
ML570 G2		X	X	X	X	X	X		
DL320	X							X	X
DL320 G2	X							X	X
DL360									
DL360 G2		X	X	X	X	X	X		
DL360 G3		X	X	X	X	X	X		
DL380									
DL380 G2		X	X	X	X	X	X		
DL380 G3		X	X	X	X	X	X		
DL560		X	X	X	X	X	X		
DL580		X	X	X	X	X	X		
DL580 G2		X	X	X	X	X	X		
DL740		X	X	X	X	X	X		
DL760		X	X	X	X	X	X		
DL760 G2		X	X	X	X	X	X		
BL10e									
BL20p		X	X		X	X	X		
BL20p G2		X	X	X	X	X	X		
BL40p		X	X	X	X	X	X		