

Solutions for the adaptive enterprise.



HP StorageWorks  
XP Disk Array family brochure  
Stress-free solution

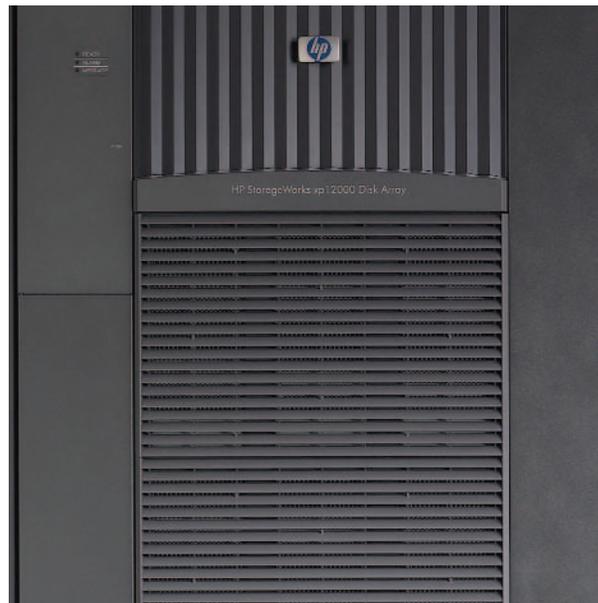
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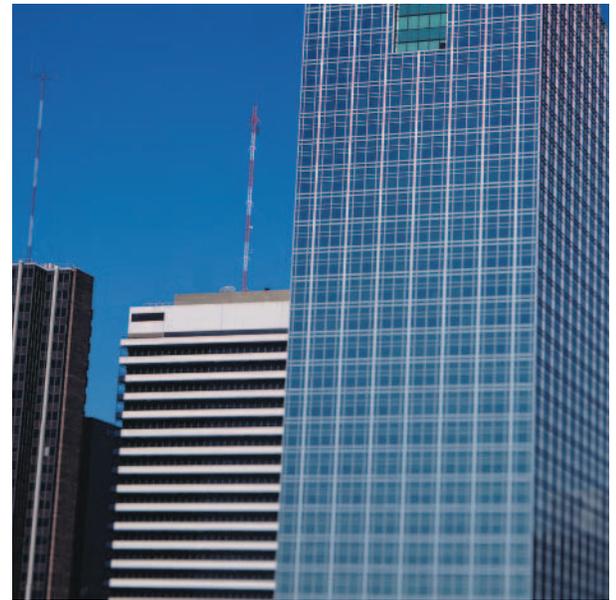
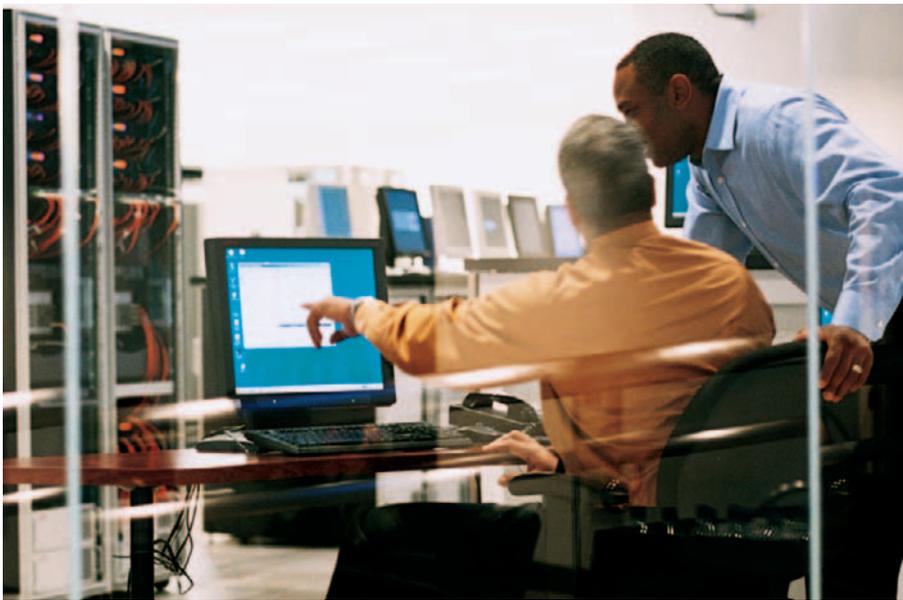


“The XP line of storage is the Cadillac of storage from HP. Its reliability is critically important to us. If we go down for thirty minutes, we have to tell airplanes not to fly.”

—Eric Craig

Managing Director of Technology  
Continental Airlines





## HP StorageWorks XP Disk Arrays

To stay competitive in today's business climate, organizations must control IT costs and expenses while continuing to meet the needs of the business. And, with many budgets flat, everyone must do more with less while providing uninterrupted availability to critical data. Adding to this burden is the accelerating pace of change, which must be effectively managed for a business to succeed.

The HP StorageWorks XP Disk Array family provides organizations with solutions that ensure information uptime, reduce IT management complexity, provide flexibility for growth and change, and decrease storage costs through consolidation. The XP family's always-on operations support and guaranteed uptime service levels provide a solid framework for disaster recovery and business continuity solutions to provide 24x7 data access. With the highest scalability in the industry, up to 332 TB in a single array, and support for over 20 operating systems including mainframe, you get the reliability and outstanding agility you've come to expect from the industry's leading storage solution provider.

### Fast, flexible and stress-free storage

Business downtime is costly. The HP StorageWorks XP family is storage without compromises, offering across-the-board excellence and bottom-line business benefits:

#### **Always-on availability with no single-points-of-failure**

With XP storage, all critical components are redundant and hot-swappable, including disk drives, I/O interfaces,

power supplies, batteries, fans and control processors. Array-to-array local and remote copying of data ensures that when one array becomes unavailable in a disaster, data remains available from a local or remote array. In addition, zero-downtime backup, instant recovery solutions and online upgrades enable data protection and dynamic scaling without business disruption.

#### **Scalability**

The XP family allows you to start at the size you need, and with no disruption to your business applications, scale to the highest usable capacity of any array available on the market. The highly scalable design allows you to meet capacity, performance, and heterogeneous connectivity needs for today, tomorrow, and the future.

#### **Manageability**

Using XP solutions as a platform for storage consolidation, you can efficiently manage multiple disparate arrays and hundreds of terabytes of data from a single management window, without adding staff or complexity.

#### **Serviceability**

Servicing and maintaining your XP array is stress free. You can replace any component online with no interruption to your business.

#### **Flexibility**

The XP family gives you a wide range of choices to meet diverse and heterogeneous IT needs. It supports multiple operating systems and offers open system connectivity, so you can configure your storage system with a wide variety of host servers and interfaces via iSCSI, Fibre Channel, FICON or ESCON.

#### **Exceptional performance**

To keep users productive and boost transaction throughput, the XP family offers outstanding performance for both random and sequential I/O workloads—ideal for database, OLTP, Oracle, SAP and Microsoft® Exchange environments.

“The HP StorageWorks XP1 2000 Disk Array has an excellent price/performance ratio. We get increased productivity via higher throughput speeds combined with zero downtime. The XP also has a compact footprint, which conserves floor space.”

– Aaron Neinhuis, Team Leader  
UNIX Administration Priority Health

### Value

The XP family delivers both excellent price/performance and lower total cost of ownership thanks to increased uptime and productivity, ease of management and data-center space conservation. XP arrays also deliver valuable peace of mind. It's a proven, reliable platform with more than 5000 frames and 50 PB of capacity installed to date.

### Advancing the HP StorageWorks grid providing a foundation for Information Lifecycle Management (ILM)

The HP StorageWorks grid describes the physical infrastructure and software that delivers information services in an Adaptive Enterprise. As a next step in the HP StorageWorks grid strategy, the newest XP's enable connection to external low cost storage such as the HP StorageWorks Modular Smart Arrays (MSA1000, MSA1500) as well as third party arrays—all managed through the XP as a single system image. This provides a tiered disk storage foundation reducing the cost of retaining information throughout its lifecycle.

## Complete storage

With XP disk arrays, you get more than just hardware. You get a complete storage solution package of HP hardware, microcode, software and services.

## HP storage software

HP's complete line of industry-leading storage software products is designed to provide robust data protection, enterprise storage resource management, and virtualization.

- Software for XP disk arrays provides centralized, efficient and simple tools for monitoring and management, including best-in-class disaster recovery tools that enable application recovery without disruption.
- HP StorageWorks Command View XP Advanced Edition is the strategic device manager for XP array products, based on a hybrid fusion of the best in breed features of

the current Command View XP together with additional Wizard-based dialog screens and multiple ease of use modules. It can centrally manage, configure, provision and monitor XP disk arrays, and is tightly integrated with the HP Storage Essentials suite of software.

- HP StorageWorks XP Disk/Cache Partition software enables an XP disk array to be subdivided into multiple, individually managed logical arrays, each consisting of dedicated ports, cache, and disk capacity. These logical partitions can then be allocated by application or user, delivering accountability and chargeback. Partitions provide security by isolating access to users or administrators based upon desired authorization. Logical partitions may also be reconfigured dynamically, without downtime or disruption of service.
- HP StorageWorks External Storage XP uses advanced virtualization technology to allow storage administrators to host XP1 2000 Disk Array LUNs on externally attached storage subsystems. External Storage XP presents multiple tiers of storage to a wide range of host systems. Instead of seeing a confusing collection of dissimilar arrays, host systems perceive all the data to be stored inside the XP disk array. In effect, the XP disk array becomes the storage controller for a flexible, multi-tiered collection of storage with a range of cost and performance capabilities. External Storage XP provides outstanding scalability for consolidation—up to 30 Petabytes (PB) of external storage can be configured 'behind' a single XP1 2000.
- HP Storage Essentials is the first open, standards-based suite of storage products designed to integrate into HP's unified server-storage management platform, HP Systems Insight Manager. HP Storage Essentials suite is an open, integrated family of Storage Area Network (SAN) management and storage resource management solutions that enable you to visualize, monitor, report on, provision, and configure your multi-vendor storage environment through a single, web-based, enterprise console. Command View XP Advanced Edition (CV XP AE) integrates smoothly and efficiently with each member of the Storage Essentials family to ensure a seamless, effective solutions interface between XP arrays and HP's SRM solutions to provide the utmost in compatibility, ease of use and customer satisfaction.

## HP solutions

Thanks to HP StorageWorks solutions, you can spend more time running your business and less time running your storage system. HP StorageWorks solutions provide tested and supported configuration information that allows for rapid deployment of your storage infrastructure, improved resource utilization, and higher efficiency. You can also take advantage of unique functionality. For example, our HP StorageWorks Continuous Access software provides support for Continental Clusters, Metro Clusters and Cluster Extensions. And with HP

“The HP StorageWorks XP1024 Disk Array offered all the features and functionality we needed: proven performance, rock-solid expansion capabilities, centralized functionality, and support for heterogeneous environments.”

– Pedro Durlinger  
Cyber Center Project Manager  
KPN Integrated & Managed Solutions



StorageWorks Business Copy and Snapshot software, you can take advantage of fast recovery solutions that permit rapid recovery from disk rather than tape. HP StorageWorks Command View XP Advanced Edition provides for centralized array management, tight integration with higher levels of management software such as Storage Essentials and OpenView, and enhanced ease of use in performing fundamental array tasks.

For more information on HP Storage Solutions, please visit: [www.hp.com/go/storagesolutions](http://www.hp.com/go/storagesolutions).

HP storage solutions include:

- Business Continuity and Availability Solutions
- Storage Consolidation Solutions
- Information Lifecycle Management Solutions
- Resource Management Solutions
- Application Solutions
- Managed Storage Solutions

## HP network storage services

HP offers the industry's leading portfolio of storage services, including mission-critical and multi-vendor environment support—and you won't find a better team of storage experts anywhere. We offer packaged services and optional services that include:

- Storage Solution Services
- Strategic Storage Consulting Services
- Storage Architecture and Design Services
- Per-Event Services
- Information Lifecycle Management (ILM) Services
- Storage Deployment Services
- Multi-vendor Environment Services
- Storage Education Services
- Managed Storage Services

For more information on HP network storage services, please visit: [www.hp.com/go/storageservices](http://www.hp.com/go/storageservices).

## A complete HP IT system

When you combine the broad HP storage product portfolio of disk, tape, optical, storage software and storage services with HP's server solutions such as Integrity, ProLiant, NonStop and AlphaServer systems, and HP services, you get even more value, simplicity and agility from your IT. It is the power of HP bringing more to you and your Adaptive Enterprise. The advantages include:

- **New unique support:** The HP StorageWorks XP family is the only array-based consolidated storage with the reliability and availability required to support mission-critical HP NonStop servers.
- **Seamless integration:** HP servers are developed and cross-tested on HP StorageWorks solutions, for unsurpassed product integration.
- **Common management environment:** HP has common server/storage management tools, making learning, using and maintaining them simpler.
- **Better price/performance:** HP servers and StorageWorks solutions perform optimally together and lead many standard benchmarks for performance.
- **Simple procurement and deployment:** HP makes it simple to procure and deploy storage, thanks to complete factory-integrated solutions.
- **End-to-end services:** HP Services can support you at whatever level you require, from break-fix service to a fully managed datacenter.
- **Single-vendor accountability and efficiencies:** HP offers the overall ease and simplicity of working with one trusted partner.



### XP12000 Disk Array

The HP StorageWorks XP12000 Disk Array delivers state-of-the-art reliability and “always-on” availability for enterprise mission-critical IT. Advanced virtualization technology provides tiered storage up to 30 PB. Array partitioning eases provisioning, while local and remote data copying enables multi-site disaster tolerance.

- Scales from nine to 1152 drives to meet both consolidation and growth needs.
- Up to 332 TB raw and 290 TB usable storage capacity. Support for over 30 PB with external storage.
- Performance is two to four times higher than previous XP generations, delivering more transactions/hour.
- External storage capability links to low-cost or legacy storage devices for unified, grid-like management.
- Cache and disk partitioning.
- Enhanced online firmware update process.
- Industry-leading performance, massive boot-once scalability, and world-class services enable an adaptive enterprise that can quickly capitalize on and manage change and decrease stress where downtime is not an option.

Always-on availability for mission-critical IT environments; massive scalability, boot-once reliability, outstanding performance, and heterogeneous connectivity increase business agility and decrease the stress of running applications where downtime is not an option

### XP10000 Disk Array

The HP StorageWorks XP10000 Disk Array delivers Enterprise class reliability and “always-on” availability for mission-critical IT. Advanced virtualization technology provides tiered storage up to 16 PB. Array partitioning eases provisioning, while local and remote data copying enables multi-site disaster tolerance.

- Provides the features and functionality of the XP12000 in a lower cost package.
- Scales from five to 240 drives with up to 69\* TB of raw storage capacity
- External storage capability links to low-cost storage devices for unified, grid-like management.
- Cache and disk partitioning.
- Enhanced online firmware update process.
- Perfect for mid-size consolidation as well as for database, OLTP, Oracle, SAP and Exchange workloads.

\* At initial release the configuration will be limited to one rack that can contain up to 120 disks or 35 TB of raw capacity. A second rack that can contain 120 more disks (240 total) and increase total raw capacity to 69 TB is scheduled for availability in Fall 2005.

## Support for previous generations

The XP12000 and the XP10000 offer compelling enhancements over previous XP arrays (XP1024, XP128, XP152, and XP48). However, customers who have legacy XP arrays installed in their environment can expect full support (including any failed hardware components) for the life of the product. In addition, HP provides full upgrade support to the architectural limits for previous

HP StorageWorks XP Disk Array storage products give you the agility to adapt to real-time business needs.

arrays (including all add-on components such as disks, cache, ACP, CHIP pairs, etc) as well as software support to add new functionality to the arrays. HP Services is also available to maximize the utility of the array in each customer environment.

### XP1024 Disk Array

- Scales from nine to 1024 disk drives in one to five cabinets.
- Up to 149 TB of raw and 130 TB of usable storage capacity in a single array.
- Extraordinary performance, substantial boot-once scalability, heterogeneous connectivity, and world-class services for data-intensive, HA-critical applications such as data mining and data warehousing for OLTP, ISPs and telecommunications customers with high storage and growth expectations.

### XP128 Disk Array

- Delivers all the software functionality of the larger XP1024 in a smaller footprint.
- Scales up to 128 disk drives in a single cabinet system.
- Up to 36 TB of raw and 31 TB of usable storage capacity.
- Ideal for OLTP, mid-size datacenter storage consolidation, business intelligence and data warehousing, e-commerce, telecom call data tracking and Internet applications.

## Storage for an adaptive enterprise

In a world where every business decision triggers an IT event, the XP family contributes to an adaptive enterprise —one that quickly capitalizes on and manages change. HP StorageWorks XP storage solutions give you the agility to adapt to real-time business needs. They offer outstanding value by ensuring your information is protected and available. And through storage consolidation and management efficiency, they make IT a simpler undertaking.

## HP Financial Services

HP Financial Services offers an array of leasing and financial life cycle management services around the world. We can help you transition from existing equipment to the latest technology, acquire a new solution cost-effectively and manage that solution throughout its life cycle. Our goal is to help you increase the return on your IT investment, reduce risk and get the most from your HP solution.

To find out more, contact your HP Financial Services representative at 1-888-215-8868 or visit us online at [www.hp.com/hpfinancialservices](http://www.hp.com/hpfinancialservices).

## For more information

To learn more about HP StorageWorks solutions please contact your HP representative or visit: [www.hp.com/go/storagesolutions](http://www.hp.com/go/storagesolutions).

For more information on HP StorageWorks XP Disk Arrays, please visit: [www.hp.com/go/storageworks/xp](http://www.hp.com/go/storageworks/xp).

For more information on services, please visit: [www.hp.com/go/storageservices](http://www.hp.com/go/storageservices).

[www.hp.com/go/storageworks/xp](http://www.hp.com/go/storageworks/xp)

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