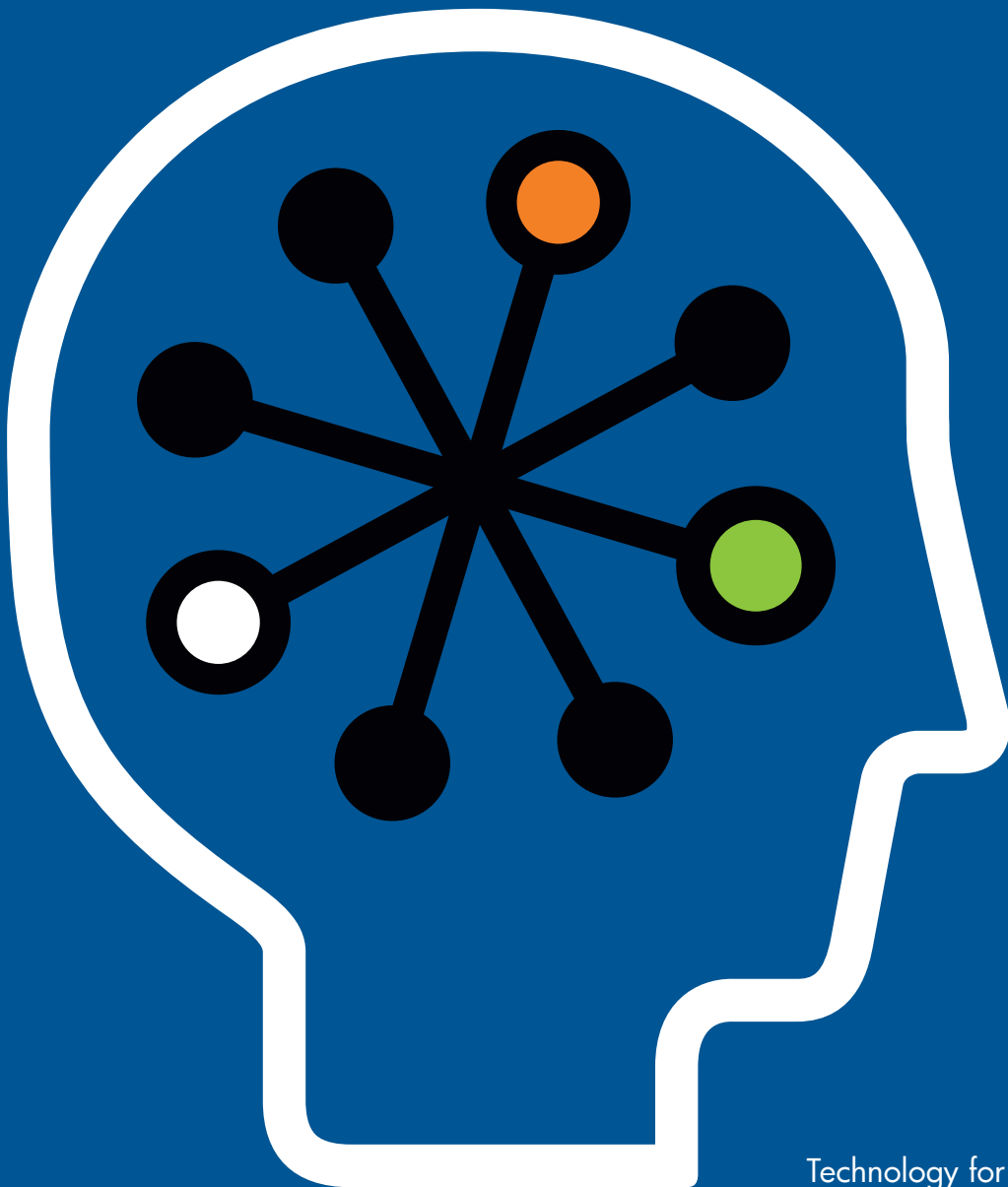




HP StorageWorks

Overview brochure



Technology for better business outcomes



Explosive growth in the amount of data is changing the face of business. Most companies are managing more than 30 times the amount of data they had less than ten years ago, and annual growth rates of over 100 per cent are common.

Driving the expansion are factors such as increased use of e-mail and rich media, governmental regulations, and the need for data protection that safeguards both customer privacy and business survival.

Storing this data so that it's widely available yet secure is a formidable challenge for IT administrators. Already pressed to improve results with fewer resources, they have little room for error. Every expenditure comes under scrutiny, not only for cost but, increasingly, its contribution to the bottom line.

Data storage is no exception. In fact, the strategy your company adopts to store, protect and distribute data has a profound effect on its overall competitiveness. More and more, this strategy shapes day-to-day operations, determining how your company interacts with customers and responds to competitors.

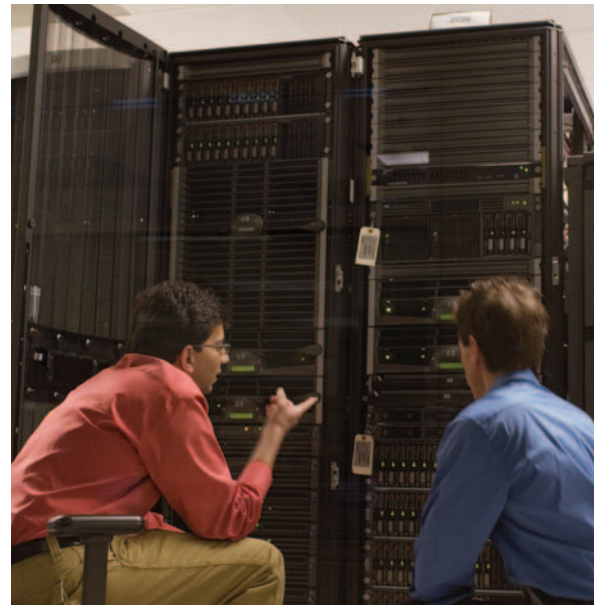
The pressure is on to make sound decisions in an area that many perceive as complex and expensive. In the view of many businesses, coping with huge increases in data means adding new equipment and technologies that require sophisticated management tools. In addition, many businesses – especially if they

are small or midsize – lack the budget or expertise to pursue a coherent storage strategy. Often their administrators are already handling networks, databases and support. For them, it may seem easier to stick with some form of direct-attached storage (DAS), even as their servers outgrow their storage capacity.

Network storage technologies like NAS (network-attached storage) and SAN (storage area networks) can overcome the shortcomings of DAS, but the threats of cost and complexity persist. It doesn't help that many solutions are proprietary, with their own operating systems, management architectures and hardware platforms. Lack of standardisation can lead to zigzag upgrade paths and higher total cost of ownership.

Ultimately, you want complete storage solutions that fit your needs and enable information growth, while reducing risk and cost at the same time. You want all parts of your infrastructure to work together to produce the best possible results with lower cost and complexity.

Delivering these kinds of solutions is what HP StorageWorks does. We offer a full portfolio of solutions that don't just store data, but give you productive ways to align it with your business objectives. They reveal storage as an investment you can turn into real competitive advantage. HP StorageWorks will help you find solutions that strengthen your business results.



Storage for the Adaptive Infrastructure

In today's business climate, you need an agile, flexible IT infrastructure – an adaptive infrastructure – that lets you respond quickly to new opportunities and challenges. Storage technologies are an integral part of this infrastructure, but may not be as agile as you would like. Often they are acquired at different times from different vendors, which adds complexity because you have to manage them as separate systems.

By integrating proven HP StorageWorks solutions into your IT systems, you can create a more adaptive infrastructure – one that can transform high-cost IT islands to low-cost shared pools of IT assets.

StorageWorks solutions are based on the deep portfolio of HP products, including disk arrays, tape drives, network-attached storage (NAS), storage area network (SAN) and storage software. They are designed to help you:

- Reduce the cost of IT operations
- Deliver higher quality of service for higher business efficiency
- Increase the speed with which IT changes can be introduced

An Adaptive Infrastructure, our vision for delivering the next-generation data centre, embraces several key areas of your operation, and you'll find that our portfolio solutions deliver the capabilities you need to be successful in each.

Systems and services

An Adaptive Infrastructure requires scalable and flexible servers, storage, software and services. HP StorageWorks modular, standards-based solutions help protect your data and keep it available to your business. They improve performance, efficiency and continuity while helping you manage multi-vendor environments and evolve to open architectures.

HP also provides a wide range of infrastructure services, including:

- Support
- Consulting and integration
- Outsourcing
- Financial services

StorageWorks examples:

- HP ProLiant Storage Servers simplify storage management by consolidating servers and storage. They provide file and print services, yet scale easily for future storage expansion.

Management

Our strong management portfolio allows you to unify the management of your server and storage infrastructure, enhance the planning and execution of change, and automate IT service and asset management.

StorageWorks examples:

See the big picture. Award-winning HP Storage Essentials Storage Resource Management (SRM) Software lets you monitor and control your entire storage environment from a single web-based console. It also integrates with HP Systems Insight Manager so you can easily manage storage and servers together.

Power and cooling

Our innovative power and cooling technologies and services help you stem rising costs by making computing more energy efficient. In addition, customisable assessment and site planning services help you understand how to use your resources more efficiently.

StorageWorks examples:

- Both the Enterprise Virtual Array and XP Disk Array families improve utilisation through better provisioning of storage. Their design helps provide that capacity is fully utilised by the array, which significantly reduces energy costs.
- Bridge the gap between managing your IT equipment and your data centre with HP Dynamic Smart Cooling technology, which automatically manages your facility's environment to deliver cooling where it is most needed.
- HP Thermal Assessment Services help you reduce power consumption while improving data centre density. Intelligent thermal tuning helps you reclaim capacity, and postpone or even eliminate the need for costly mechanical upgrades.

Security

The need to protect confidential information is driving requirements to upgrade data security, especially in industries such as financial services, government, health care and the retail card industry where liabilities can be substantial.

HP StorageWorks builds in security safeguards that protect your data and help you comply with disclosure regulations. HP Secure Advantage solutions, for example, deliver proactive resource protection, end-to-end data protection and cost-effective validation.

Successful key management is crucial: A lost key is essentially lost data, so mandating that keys be kept safe for your data's entire life span is essential. Build in everyday protection with HP StorageWorks storage encryption and key management solutions that seamlessly integrate into your environment.

StorageWorks examples:

- Encryption provided by Data Protector Software protects sensitive information on disk and tape, enabling you to comply with industry and government regulations demanding a high level of data security.
- HP StorageWorks LTO-4 Ultrium 1840 tape drives with Advanced Encryption Standard (AES) 256-bit data encryption protects user data from unauthorised access if cartridges are lost or stolen while being stored or transported offsite.

Virtualisation

As your business needs change, so too do the storage resources that are needed. However, organisations often struggle to allocate resources in a timely and efficient manner. Our approach to storage virtualisation can help you maintain and manage your storage assets in a way that delivers:

- Simplicity through streamlined resource management and improved resource utilisation
- Agility with flexible, scalable network storage environments accessible by most of today's popular servers
- Value through efficiency, consolidation, management simplification and higher application productivity

StorageWorks examples:

- EVAs provide storage solutions that are easy to install, manage and support while lowering your storage environment's complexity and TCO.
- Virtual Library Systems improve backup and recovery performance as well as overall reliability of the data protection process.
- By providing a single virtual storage pool, the SVS200 Storage Virtualization System simplifies management of multi-vendor, heterogeneous storage systems.

Automation

To create a 24x7 lights-out data centre, you need to put automation to work. Our solutions automate time-intensive processes, dynamically shifting the focus from repetitive manual tasks to automated, intelligent workflows that achieve desired business outcomes. Think of how much more productive you could be when you use HP StorageWorks to automate tasks such as auto-discovery, topology visualisation, capacity and performance monitoring, chargeback, provisioning, backup reporting and more.

StorageWorks examples:

- HP Storage Essentials SRM Software automatically discovers and maps the storage network.
- The HP StorageWorks All-in-One Storage Manager automates the migration of data from capacity-constrained servers running popular applications like Microsoft Exchange 2003/2007 and SQL Server 2000/2005 as well as automates disk-based data protection to enable easy rollback and disaster recovery.
- HP StorageWorks Application Recovery Manager Software automates restoration of application databases, such as Exchange and Microsoft SQL, in the event of failure or corruption.
- The HP StorageWorks D2D Backup System provides reliable, consolidated data protection for up to four servers in a single, self-managing device. It works with your backup software application to fully automate daily backup jobs.
- HP StorageWorks Cluster Extension XP and EVA provide automated, hands-free failover/failback decision-making as it detects failures and automatically manages recovery without human intervention.

Additional challenges

Rapid changes in the storage industry give rise to many challenges, especially in the areas of consolidation, continuity, control and compliance. HP storage solutions help organisations like yours to meet these challenges.

Storage consolidation

For many organisations, IT growth results in a disparate collection of devices that are poorly utilised and costly to manage. Through IT consolidation, you can reduce the complexity of your environment, eliminate redundancies and better align business with IT.

Storage consolidation is an integral element of any IT consolidation effort and can take many forms, including:

- Physically consolidating storage devices located in multiple data centres into a smaller number of data centres
- Consolidating data stored across a variety of devices from multiple vendors onto a smaller number of networked storage devices
- Consolidating storage management and other management tasks such as backup
- Consolidating backup resources to reduce your backup window and improve backup and restore services

Simplifying IT infrastructures, whether HP or multi-vendor, is a fundamental building block of HP StorageWorks solutions. We can help you reduce costs and improve business agility, making it easier to leverage information for competitive advantage. HP StorageWorks products provide you with simpler, streamlined management solutions for online, backup, e-mail and remote office consolidation. For more information, visit

www.hp.com/go/storageconsolidation.

Business continuity and availability

In a business environment that depends on information technology more than ever before, you need sound practices for managing risk, securing customer data and delivering nearly flawless availability. HP StorageWorks solutions help you build and manage agile, resilient environments that reduce operational risk and unplanned downtime, and enable continuous operation of critical business processes.

Products include:

- High-availability and disaster-tolerance solutions
- Data protection and recovery solutions
- Security solutions

For a dramatic illustration of how quickly and precisely HP StorageWorks solutions can recover from a disaster, visit www.hp.com/go/DisasterProof.

The video shows a data centre actually blown to bits simulating the effects of a natural gas explosion. Numerous HP products, including servers, software and an XP array from StorageWorks were destroyed. Nevertheless, every system failed over completely to another site within two minutes.

For more conventional information, visit www.hp.com/go/StorageWorks/bca.

SAP, Oracle and Exchange

At the heart of your business are the applications you run, and the information from those applications is a strategic asset. HP offers broad application support, including those from Oracle®, Microsoft®, SAP and others, and helps improve performance for better productivity, faster backups, and ability to comply with regulations.

Unlike products from storage-only vendors, our StorageWorks solutions are purposely designed from the application down – not the storage box up. This tight link between your applications and our solutions helps deliver superb performance and uptime. Your data is accessible when and where you need it. By leveraging solutions like Reference Information Manager for Databases, you can achieve swift ROI by storing data on the lowest-cost media.

As important as storage is, it takes all elements of an infrastructure working in harmony for your applications to perform their best. We provide across-the-board options – hardware, software, management, services – that give you the kind of synergistic performance that only results when solutions are designed to work with each other from the ground up.

For more information, visit www.hp.com/go/StorageSolutions.

Simply StorageWorks Solutions

Small and medium-size businesses face many of the same continuity, control, consolidation and compliance challenges as large enterprises. The HP Simply StorageWorks portfolio of products provides a set of fully integrated solutions for small and medium environments and remote locations. With HP Simply Consolidation and Simply File Services, we provide easy-to-use and manage solutions for businesses wanting to consolidate and simplify data manage-

ment and availability. HP Simply Business Protection provides simple solutions for data availability, recovery and retention. For more information, visit www.hp.com/go/SimplyStorageWorks.

HP StorageWorks portfolio

HP StorageWorks solutions can be fully integrated with your existing IT infrastructure to help with storage consolidation, business continuity and availability, information lifecycle management (ILM), and unified storage and server management. These solutions are based on our deep portfolio of products – disk arrays, tape drives, network-attached storage (NAS), storage area network (SAN) and storage software – and all are backed by HP Services.

Disk Storage systems – a portfolio of leading storage products that work together in a tiered storage architecture:

- All-in-One (AiO) Storage Systems provide simple, affordable networked storage (NAS and iSCSI SAN) with integrated data protection features and simplified management.
- Modular Smart Arrays are low-cost, scalable storage consolidation systems for entry-level to midrange servers and storage area networks.
- Enterprise Virtual Arrays are solutions for midrange to enterprise-class environments that require high performance, capacity and availability.
- XP Disk Arrays are enterprise-class storage systems designed to deliver the extreme reliability and availability needed for critical applications and always-on environments.

For information, visit www.hp.com/go/arrays.

Like you, HP is transforming its IT infrastructure to a next-generation data centre to optimise business outcomes. We have one of the world's largest data centre infrastructures, and we use it as a proving ground for our products, services and solutions.



Storage networking

- **Network-attached storage (NAS)** – NAS provides scalable, high-performance network acceleration, disk-based data protection for Windows® file servers, file serving and data sharing solutions. For example, the HP StorageWorks Enterprise File Services Clustered Gateway is a high-performance NAS file server gateway that scales performance and throughput to leverage existing and new SAN or iSCSI storage for either Linux or Windows. For information, visit www.hp.com/go/NAS.
- **Storage area networks (SAN) infrastructure** – Our solutions enable flexible, open, standards-based storage infrastructure from the worldwide leader in SAN. For information, visit www.hp.com/go/SAN.

Tape storage and media:

- **Tape solutions** – Our award-winning family of tape solutions includes tape library systems, virtual library systems (VLS), tape drives, autoloaders, tape enclosures and arrays, tape interconnects/routers, media. For information, visit www.hp.com/go/Tape.
- **Storage software** – HP software is designed to help you better manage your storage area network and deliver greater IT value. For information, visit www.hp.com/go/StorageWorks/Software.
- **Storage archiving** – The HP solution provides a safe, permanent way to archive huge amounts of information and keep it immediately accessible. For information, visit www.hp.com/go/Archival.

If you're not sure where to begin, we have a helpful tool on our website called the Storage Product Selector Tool. This tool is designed to help you quickly and easily determine what product you need based on a few simple criteria. See the tool at www.hp.com/go/product-selector.

HP Services

With more than 5,000 storage service professionals in 160 countries, HP Services offers an outstanding combination of global resources and network support know-how. HP Services can provide the precise type and level of storage support you require to design, build, integrate, manage and evolve your storage solutions.

Partner with HP StorageWorks services for:

- A comprehensive services portfolio that includes consulting, integration, installation, migration, outsourcing and more
- Expert support for heterogeneous SANs and NAS
- End-to-end services for information lifecycle management
- Single-point-of-accountability support

For more information about HP Services, visit www.hp.com/go/StorageServices.

Why HP

Like you, HP is transforming its IT infrastructure to a next-generation data centre to optimise business outcomes. We have one of the world's largest data centre infrastructures, and we use it as a proving ground for our products, services and solutions. In addition to developing best practices that we share with customers, we use information gained from our data centres to evolve and enhance our products.

Our solutions leverage a complete, integrated suite of hardware, software and services from HP and our partners to provide the building blocks for your next-generation data centre. We take a standards-based approach that embraces multi-vendor, multi-platform products and heterogeneous management tools and services. We also offer a strong portfolio of industry-specific solutions.

Our global service delivery team can help bring it all together with best practices from companies around the world. What's more, we offer engagement flexibility – we strive to work with you on your terms, not ours. For more information, visit www.hp.com/go/Why-HP-Storage.

Financial services

Increase your return on investment and deliver measurable business value, all while reducing the financial impact of change. HP Financial Services provides innovative financing and financial asset management programmes to help you cost-effectively acquire, manage and ultimately retire your HP solutions. For more information on these services, please contact your HP representative or visit www.hp.com/go/hpfinancialservices.

Successes and awards

Our success in providing enterprises around the world with superb storage solutions is evident in HP StorageWorks' record of industry success stories. To read HP StorageWorks success stories, visit www.hp.com/go/storage/casestudies.

To view HP StorageWorks awards and recognitions, visit www.hp.com/go/storage/awards.

For more information

For more information about HP StorageWorks solutions, contact your HP representative, local partner or reseller, or visit www.hp.com/go/StorageWorks.

To learn more, visit www.hp.com/go/StorageWorks

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