



Storage consolidation services from HP

The fastest path to an agile, cost-effective, high-performance storage infrastructure



Overview

- Improve storage resource utilization levels
- Simplify system management
- Reduce the cost and complexity of your entire storage environment

Growing data can be a growing problem

Digital data storage is one of the most persistent challenges facing IT organizations today. The volume of information created by even a small company in an average day is overwhelming. The amount created by larger enterprises is almost beyond comprehension.

If your company is like most, you've dealt with this problem incrementally—adding storage as needed to meet the requirements of each department. You've probably used different technologies from different vendors at times, and chances are you've over-provisioned to ensure availability and meet service-level objectives.

That's a fine approach, but it's not without drawbacks. Heterogeneous systems can be difficult to manage and difficult to change. They tend to require a great deal of effort to sustain availability and meet service levels, they're costly—and, because they are often overprovisioned, they're almost universally underutilized.

Create a better storage infrastructure

HP Storage Consolidation Services can help you create a more efficient, cost-effective, agile storage infrastructure—one that not only improves storage resource utilization, but also makes it easier for your company to respond rapidly and effectively to changes in the marketplace. We leverage our knowledge in the areas of standardization, virtualization, and automation to move you toward a more modular architecture and help you make better use of your existing infrastructure components to reduce the cost and complexity of your storage environment. This process creates a more agile IT environment and frees up assets, so your company is well positioned to launch new initiatives, make the business more competitive, and, ultimately, generate more revenue.

“A big issue for us was business continuity; a lot of our old servers were single systems that had little resilience. So with the help of HP, we came up with a vision of a dual server farm, supported by consolidated storage and blade server technologies to create a shared computing model.”

– Tony Doyle, deputy head of IT, Blackpool Council, UK

The HP approach to storage consolidation

HP has adopted a unique approach to storage consolidation. Rather than attacking it from a technical perspective, we first make a point of understanding the business and financial opportunities that storage consolidation represents for each customer. Then, we implement technical solutions that will enable the realization of the calculated cost savings.

HP believes there are three primary benefits that can be achieved through consolidation, and it is important to balance these based on each customer's unique business needs:

1. **Reduce the cost of service.** HP examines hardware, software, networking equipment, support staff, security, and training to root out duplication of effort, poor productivity, incompatibility, high maintenance requirements, and outright failures. This exercise is instrumental in helping us pinpoint the areas of greatest financial opportunity and then capitalize upon those opportunities to help customers reduce costs.
2. **Improve the quality of service.** Improved QoS reduces business risk by seeing that the system meets service delivery needs, increases service availability (24x7), and maintains stated service levels.

3. **Improve business agility.** An agile IT infrastructure adds value to the business by accelerating the company's ability to introduce new products and services and respond quickly to competitive challenges and market changes. It also enables new markets, business models, and opportunities (e.g., mobile, e-commerce, and e-services).

HP meets your need to move to a next-generation data center with the Adaptive Infrastructure, a portfolio based on standard building blocks, automated using modular software, and delivered through comprehensive services. Adaptive Infrastructure offerings lay the foundation for an Adaptive Enterprise by allowing you to move from high-cost IT islands to low-cost shared IT assets. Through HP Adaptive Infrastructure offerings you gain:

- Lower cost of IT operations
- Higher quality of service
- Speed in introducing IT change

Storage consolidation solutions

HP Services offers proven expertise, collaborative partnering, and a flexible approach to delivering storage consolidation solutions. We can take on all or any part of your consolidation project, supporting every lifecycle phase—from analysis and strategy to architecture and validation, and on through design, implementation, and ongoing management and support.

Backup consolidation

Rapid recovery from system downtime generally depends on how efficient your backup and recovery solution is and how well it's integrated with your storage infrastructure.

The HP Backup and Recovery Solution Service (BRSS) provides end-to-end management of your backup integration process. The HP Services team works with you to analyze your business and IT environment, develop a comprehensive integration plan and timetable, design an architecture that suits your critical requirements, install backup software, implement your solution, and validate and monitor your configuration.

HP Backup and Recovery Solution Service helps you:

- Quickly implement a configuration that cuts your total cost of protecting data
- Cost-effectively meet your backup integration needs
- Lower your risk of data loss
- Close the backup "window," so you can restore data in hours, rather than days
- Lighten server and network loads
- Lower the likelihood of business disruptions due to installation or configuration problems
- Reduce backup staffing and training costs

Application and database consolidation

Most organizations rely on multiple applications and multiple databases to support their business operations. Unfortunately, these organizations typically spend more than 30 percent of their IT budgets just getting their applications to communicate with each other.

HP Application and Database Consolidation Solutions help organizations improve performance by combining multiple applications and databases into a cohesive IT environment.

These solutions help these organizations:

- Gain access to valuable data in real time
- Reduce costs via operational efficiencies
- Eliminate the complex task of managing and backing up multiple data sources
- Implement shared database and application services
- Standardize and simplify systems, application portfolios, and databases
- Decrease the cost, time, and risk associated with application and database upgrades and expansions

Utility-ready storage

Enhancing the business value of IT means rapidly scaling your storage resources to meet changes in demand. But traditional infrastructures have been set up to promote stability, not quick responsiveness. So, if your IT staff is like most, it is constantly struggling to keep pace by applying stop-gap fixes to largely outmoded legacy solutions.

HP StorageWorks Utility Ready Storage is designed to help you create and maintain an infrastructure with the agility to adapt to change quickly and easily. This innovative alternative to traditional IT ownership is a practical, cost-effective approach that makes aligning your resources with fluctuating demand remarkably simple.

HP StorageWorks Utility Ready Storage integrates HP technology, services, and financing to deliver IT resources when you need them, where you need them—with payment based on usage.

You enjoy the best of both worlds: the control and peace of mind that come with ownership of your storage infrastructure technology, plus the flexibility to scale capacity quickly and easily as utilization fluctuates.

Choose from solutions for managed capacity, metered capacity, and instant capacity—all with hardware, software, service, and support options tailorable to your requirements and business objectives.

Online and SAN consolidation

HP SAN Solution Service encompasses all the activities required for a successful implementation. You get a powerful storage solution up and running quickly and efficiently, with little disruption and great peace of mind. You guard against unexpected compatibility problems. And, you realize rapid returns on your SAN investment. The HP SAN Solution Service lets you purchase as much or as little support as your business demands.

Unified infrastructure management

Most IT organizations understand that ongoing administration and maintenance of their existing infrastructures consume the lion's share of their IT budgets, while hardware and software acquisition costs only account for about 20 percent of overall expenditures. How can you reduce your IT expenses? By streamlining your processes and reducing complexity. With HP Systems Insight Manager software, HP delivers a heterogeneous multi-OS server

“HP is the best choice for SAP IT consolidation. Via its comprehensive solutions—encompassing consulting, mission critical support, end-to-end systems management, top-performing servers and offline storage—we have improved IT efficiency, increased user productivity, reduced operational expense, and gained visibility to new target markets.”

– Elpitha Votsis, Senior Vice President and Chief Financial Officer, Harman Music Group

and storage management solution that enables you to holistically monitor and control your environment, which helps you improve operational efficiency and reduce costs. Then, to get even more from your consolidated storage environment, add HP Storage Essentials for advanced storage management capabilities.

Unified infrastructure management from HP:

- Enhances your ability to troubleshoot complex problems that span server and storage infrastructure
- Provides a single source for server and storage asset information
- Provides a comprehensive selection of Storage Essentials, ProLiant Essentials, and Integrity Essentials value-added plug-ins for extended management of HP ProLiant, Integrity, and StorageWorks platforms
- Enables effective cross-training across domains of expertise
- Allows your IT organization to focus less on daily maintenance and more on meeting future business needs

HP's storage consolidation methodology

Most enterprises remain unclear about aligning business and IT, implementing consolidation projects, calculating return on investment, and linking consolidation with architectural planning. HP has helped hundreds of large enterprises undertake successful consolidations. Our consultants bring valuable IT consolidation experience together with HP methodologies, TCO tools, and best practices, so we can enable you to meet your specific objectives.

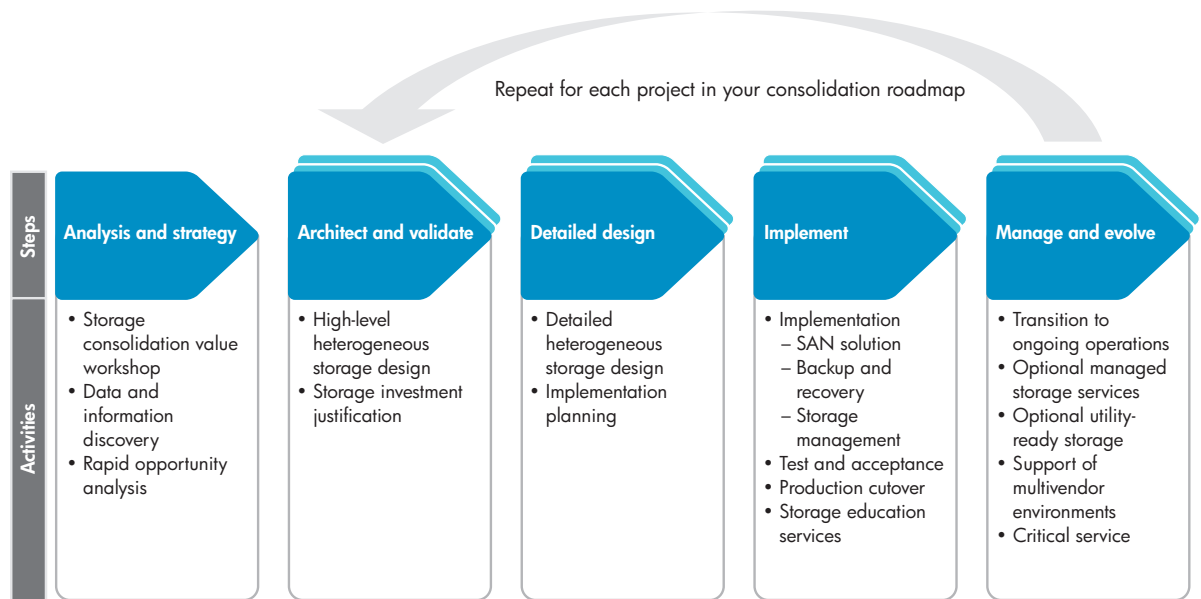
Key aspects of our approach and the talents we offer include the following:

- **Establishment of a shared set of measurable objectives** is important because consolidation is not just about IT. We focus on working with you to understand your business and IT objectives so that they will be reflected in your new enterprise architecture. We also make sure that the objectives are measurable so that, upon completion, we can both see that we have met them.
- **Opportunity analysis** lets us rapidly discover the key opportunities that can deliver the greatest benefits quickly—and we structure the consolidation initiative to accelerate those benefits by completing specific parts of the project first.
- **Architectural blueprint** enables our infrastructure architects to translate your business and IT needs into the most cost-effective, efficient storage infrastructure possible—with the scalability, reliability, and availability you need. Our process architects can help restructure your IT processes to support your new storage infrastructure proficiently.
- **Investment justification** is the assignment of our experienced financial analysts, who specialize in TCO and ROI analysis.
- **Transition planning** is directed by our project managers, who are experienced in consolidation efforts and know all the critical details that need to be addressed in analysis, design, implementation, and transition.

HP's IT consolidation methodology recognizes all the key factors highlighted here and focuses on achieving measurable results. Our methodology can be described as a seven-step process, as follows:

Step 1 — storage consolidation value workshop

We begin by bringing IT and business executives together to establish shared objectives for the consolidation. During two facilitated workshop sessions, we discuss your company's business vision, IT vision, IT governance processes, and other key IT initiatives. We also assess the current state of business and IT alignment—where IT is supporting the business effectively, and where improvements can be made. Based on this information, the business and IT executives identify and prioritize objectives for consolidation, identify constraints, and agree on measures of success.



Step 2—architectural blueprint

Next we develop an architectural blueprint for the first project. It will take into consideration the organization's business and IT strategy and the current environment, as well as market and technology trends. The architectural blueprint is designed by experienced IT architects who verify that the recommended technological path will realize the enterprise's business goals.

During this phase we will also address process improvements and organizational issues that support your objectives.

Step 3—investment justification

This phase concentrates on creating the business case for consolidation. TCO and ROI modeling tools, readiness analysis, and data-gathering methodologies are used, as appropriate to your specific objectives.

Note that steps two and three are overlaid in the depiction of our methodology. We've done this because these steps are highly related and potentially iterative—the investment justification helps to ensure that the architecture will properly support your prioritized objectives, including your financial objectives.

Multiple possible architectures may be evaluated to determine which one best meets your objectives.

Step 4—detailed design

Once the enterprise has agreed on the architectural blueprint, we engineer the specific details of the configurations and technologies. Our technical specialists have intimate knowledge of the technologies and see that all considerations (performance, for example) are engineered into the detailed design. We take a performance baseline prior to implementing the consolidation to verify that the consolidated environment will deliver equal or better performance.

As mentioned earlier, transition planning to implement the new environment is critical. Our project managers understand the steps necessary for successful consolidation implementations and will create detailed plans for the transition, including the communication processes, solution components, legacy integration, user interface, resources required, partners, milestones, key deliverables, training, pre-delivery integration, installation, testing, and cutover from existing systems and processes.

Other storage consolidation services

Solution services

- Data Replication Solution Services
- Storage Essentials Solution Service
- Electronic Vaulting Service for Enterprises

Multivendor environment services

- Proactive 24 Service for SANs
- Critical Service for SANs

Deployment services

- ProLiant Storage Server (NAS) Installation and Startup Service
- Cisco MDS Switches Installation Service
- HP Installation and Startup Service for the HP StorageWorks Multi-Protocol Router (Brocade)
- Disk Array Installation and Startup Service
- Secure Fabric OS Installation and Startup Service
- HP OpenView Virtual Replicator Installation and Startup Service
- HP File System Extender Installation Service
- HP File Migration Agent Installation and Startup Service
- HP StorageWorks Storage Mirroring Installation and Startup Service
- Enterprise File Services Clustered Gateway Installation and Startup Service
- Enterprise File Services WAN Accelerator Installation Service
- HP Installation and Startup Service for StorageWorks Tape Libraries

Mission-critical support

- Proactive 24 Service
- Critical Service
- Proactive Essentials Service
- Mission Critical Partnership

Per-event services

- Vdisk/LUN Design and Implementation Service
- Data Migration Service
- Data Sanitization Service
- HP Performance Analysis for the XP/EVA Disk Arrays Service

Managed storage services

- Managed Storage Solution Service

Education services

- SAN Fundamentals
- Accelerated SAN Essentials
- HP StorageWorks B-Series (Brocade) SAN Fibre Channel Switches
- Managing the HP StorageWorks XP Disk Array
- Advanced Management of the HP StorageWorks XP Disk Array
- Managing the HP StorageWorks EVA Disk Array
- Designing and Implementing HP StorageWorks MSA Storage Solutions
- Implementing HP StorageWorks Continuous Access EVA
- HP OpenView Storage Data Protector Fundamentals
- HP OpenView Storage Data Protector Integration
- Configuring, Managing, and Maintaining HP Storage Essentials
- HP StorageWorks Storage Mirroring Fundamentals

Step 5—implementation

Implementation is the flawless execution of the implementation and transition plan. Our experienced technical consultants will work with your teams to verify that the new infrastructure is implemented, applications and data are migrated, and appropriate tests are conducted before cutover from existing systems. Our process consultants will work with your teams to see that the new processes are implemented effectively.

Steps 6 and 7—manage and evolve

You may decide to consider comprehensive outsourcing for your consolidated environment, or you may manage it in-house. Regardless of your strategy, your new environment must be continually monitored to comply with the agreed-upon service-level agreements (SLAs). Over time, these steps include upgrades and tuning. If you decide to manage in-house, HP can provide IT Service Management experts to help you continually improve service levels to the business. HP also offers managed services for comprehensive or selective outsourcing of your IT environment.

Iteration—recurring analysis and additional consolidations

Once the initial consolidation effort has been successfully completed, additional consolidation opportunities may be addressed.

The recurring analysis is a regular review of the consolidated environment to verify that the desired goals are being achieved and that emerging technologies, volatility in the business environment, and best practices are taken into consideration on a regular basis. This check-and-balance process enables the underlying infrastructure to continue evolving in parallel with the business.

“HP StorageWorks solutions give us flexibility and powerful capabilities. HP provided a single-source solution—at lower cost than another storage vendor and with a lower total cost of ownership.”

– Dena Lee, Senior Vice President and CIO,
Southern National Bank of Texas

Why choose HP as your storage consolidation partner?

- Our methodology and tools can help you manage the transformation, and our experience in IT Infrastructure Library (ITIL) and IT Service Management (ITSM) can help you improve your results.
- We’ve helped thousands of customers with consolidations. This has allowed us to refine our storage consolidation methodology, so we can complete consolidations quickly and accelerate your time to benefits.
- Best-in-class project management is essential to completing your projects on time and on budget. HP project managers can deliver the benefits you expect, meet project objectives, manage project scope, avoid schedule slip, reduce risk, and handle program complexity.
- HP’s 400 solution architects (who average more than 15 years of experience), 6,000 technical architect specialists, and 5,000 dedicated storage professionals in more than 170 countries can complement your IT team and provide depth of expertise.
- HP has strong collaborative relationships with the technology leaders that are most important to you (such as Microsoft®, PeopleSoft, Siebel, Sybase, Oracle®, SAP, and BEA).

Ready to consolidate?

Many enterprises consider storage consolidation but are hesitant to pursue it because it seems like a costly and complex undertaking. In truth, however, consolidation is one of the most budget-friendly initiatives you can implement. It delivers significant savings from the moment it’s completed—and it keeps delivering those savings for years to come. And, of course, the entire process is exceptionally simple when you work with an experienced vendor like HP.

So are you ready to consolidate? The following symptoms suggest that you may be:

1. Buying new storage rather than doing capacity planning
2. Decentralized purchasing with centralized management
3. Experiencing single-digit utilization rates
4. Suffering from lack of data-center space
5. Skyrocketing maintenance costs
6. Losing track of storage arrays
7. Running up against scalability restrictions
8. Having a high ratio of administrators to users
9. Running more than seven operating systems
10. Having difficulty controlling software licenses

Critical success factors

Some of the key critical success factors for winning with storage consolidations are:

- Having clear objectives that are agreed upon and documented, with clear measures of success
- Having an executive sponsor and broad-based support in the organization
- Getting business buy-in, not just IT
- Addressing all aspects of the consolidation (the people issues are especially important) including IT processes, applications, and information stores, because there is danger in looking only at technology
- Managing change by using your objectives as a guidepost so you do not get distracted from your primary goals
- Looking at all the benefits you can achieve, not just cost

If you've experienced one or more of these symptoms, contact us and ask how HP Storage Consolidation Services can help you address them. We'll be happy to answer any of your questions, provide examples of how other customers have used consolidation to overcome IT challenges, and help you identify the best consolidation approach for your business and your IT environment.

For more information

If you want to know more about HP Storage Consolidation Services, contact your local HP sales office or visit the HP Web site at www.hp.com/services/storageconsolidation.

To learn more about HP StorageWorks consolidation solutions, visit www.hp.com/go/storageconsolidation.

To learn more, visit www.hp.com/hps/storage

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