A NEW APPROACH
TO ENTERPRISE
STORAGE

[FROM *the* UTILITY STORAGE COMPANY]

3PAR

CONSOLIDATE
— CONTROL —
CAPITALIZE

Storage requirements have evolved but storage architectures haven't changed. Until now.

If your company is like most organizations, the need to leverage information throughout the enterprise, consolidate storage assets, and support measurable service levels is imperative. With corporate data growing at an astounding rate, and the ever-present shortage of skilled storage specialists, companies face some tough challenges ahead. Clearly, your IT requirements have become much more complex. The problem? Old storage architectures do not adequately address these new IT issues. As a result, most companies have resorted to adding complex layers of hardware and software—greatly increasing storage costs.

A new approach is required. IT organizations like yours need a solution that can return simplicity and efficiency to the storage infrastructure for mission-critical data. You need to dramatically decrease capital and operating expenditures and provide new mechanisms to make better use of your data. Enter 3PAR.™

3PAR is the leading developer of a new category of storage systems called Utility Storage that enables organizations to exploit information to its full potential. Utility Storage allows organizations with multiple lines-of-business, departments, or customers to securely consolidate storage assets and centralize information for enterprise-scale applications. Our Utility Storage solutions provide unprecedented levels of availability, scalability, performance, and density while dramatically reducing the costs associated with purchasing, deploying, upgrading, and managing storage. With our advanced storage architecture and modular implementation, we help you reduce storage infrastructure complexity while empowering your IT department to **consolidate** your storage assets, **control** your storage environment, *and* **capitalize** on your enterprise-level storage investment.

CONSOLIDATE YOUR STORAGE

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How do you deal with massive data growth, poor asset utilization, and increasing storage management complexity? If you're like most IT managers and CIOs, you need to leverage your corporate information and IT resources to their full potential. Consolidating your storage is a key requirement, and one that requires a storage platform like 3PAR, capable of four key elements:

ULTRA-HIGH PERFORMANCE 3PAR Utility Storage solutions enable you to reduce your storage deployments— from 150 storage devices to 75, 50, 25 or fewer—without compromising the performance and service levels your users expect.

BI-DIRECTIONAL SCALABILITY 3PAR Utility Storage solutions deliver a cost-effective footprint comparable to today's modular storage arrays, but go substantially further in allowing a granular, highly-available means of scaling up capacity, performance and connectivity beyond anything on the market today.

EXTREMELY DENSE PACKAGING With 3PAR Utility Storage solutions, you can reclaim your datacenter with extremely dense packaging that delivers the performance and capacity your users' applications require in less than half the space of your next best alternative.

ALWAYS-ON ARCHITECTURE Recognizing that companies today require 24-by-7 availability to data, 3PAR's "always-on" availability eliminates both planned and unplanned downtime by placing a unique focus on both hardware and software fault tolerance.

- ▶ SIMPLIFIES THE CONSOLIDATION AND CENTRALIZATION OF INFORMATION

- ▶ REDUCES THE COST OF PURCHASING, DEPLOYING, MANAGING AND UPGRADING STORAGE RESOURCES

- ▶ SIMPLIFIES AND REDUCES THE COST OF COMPLEX SAN CONFIGURATIONS

- ▶ ACCELERATES TIME-CONSUMING STORAGE RELATED TASKS

- ▶ ENABLES COST-EFFECTIVE, REAL-TIME BUSINESS INTELLIGENCE

NO COMPROMISE CONSOLIDATION, ULTRA-HIGH PERFORMANCE

3PAR INSERV STORAGE SERVER FAMILY

The 3PAR InServ™ Storage Server Family is capable of delivering up to five-times the performance of market-leading monolithic and modular storage architectures. This ultra-high performance, coupled with unique support for mixed workloads such as OLTP, file serving, and backup/recovery, means no compromises as you consolidate your data. But 3PAR goes beyond unrestricted performance by delivering "always-on" availability, new levels of capacity, density, and a whole new approach to scalability.

The 3PAR InSpire™ Architecture, the foundation of 3PAR InServ Storage Servers, combines best-in-class open technologies with extensive innovations in hardware and software design. It features a high-speed, full-mesh, completely passive system backplane joining up to eight Controller Nodes. This low-latency interconnect allows for tight, cache-coherent coordination among the Controller Nodes and a simplified software model.

With the InSpire Architecture, availability is "built-in" from the start. Unlike other approaches, 3PAR offers both hardware *and* software fault tolerance to ensure the availability of your data. Firmware failures, a significant cause of unplanned downtime, are greatly reduced.
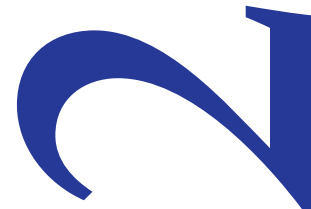
3PAR also delivers a truly modular and scalable solution, with independent and finely scalable performance, capacity, and connectivity elements. This single modular architecture can be scaled from low to high, making it deployable as a small remote system or a centralized system many times larger than current alternatives. Until 3PAR, you were often required to purchase and manage at least two distinct architectures to span a wide range of requirements. No more.

CONTROL
YOUR
ENVIRONMENT

You need an intelligent architecture equipped with automated management tools that will help return simplicity to your storage environment while giving you the power and flexibility to maximize control of your storage infra-structure. You need a storage platform like 3PAR.

REDUCE COMPLEXITY WITH A NEW APPROACH The intelligent 3PAR InSpire Architecture separates management of the logical application resources from physical storage resources to help you get the most out of your storage investment. The 3PAR InSpire Architecture also employs a 3-layer architecture to better allocate physical resources "on demand" to your applications, and to load balance across the storage server. This architecture is similar in design to virtual memory architectures of the most robust server operating systems. The 3PAR approach delivers autonomic response to storage administration and operation needs.

ENABLE CENTRALIZED, SIMPLIFIED, AUTOMATED STORAGE MANAGEMENT Simple, easy-to-use administration tools from 3PAR offer granular control when you need it, and automation when you don't. The comprehensive and efficient utilization of a 3PAR InServ Storage Server can be managed with the knowledge of a few basic commands. Yet, precision levels of control are at your fingertips when desired. For the strictest security requirements, 3PAR Utility Storage solutions offer secure, tiered levels of administration for all logical and physical resources. And through the 3PAR InForm OS, rich instrumentation provides your users and SLA administrators with access to detailed statistics from nearly every physical and logical entity of the storage server.
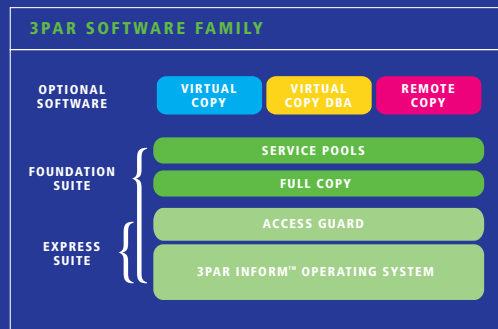
COMPREHENSIVE, NEXT-GENERATION STORAGE SOLUTIONS

3PAR SOFTWARE AND SOLUTIONS

The 3PAR Software Family begins with the 3PAR Software Suites. The Suites work with the 3PAR InServ Storage Server to deliver a new generation of capabilities in storage virtualization, ease of use, security, and service-level administration, while driving down the cost of obtaining and managing enterprise storage resources. Comprised of the 3PAR InForm Operating System and a core set of storage management software, the 3PAR Software Suites deliver a unique, new approach to management of your InServ Storage Server.

All Suites include 3PAR Access Guard that enables you to secure hosts and ports to specific volumes within the 3PAR InServ. Foundation Suite includes 3PAR Service Pools—which couple secure administration and operation policies with specific sets of physical resources—and 3PAR Full Copy, which provides a facility for full physical point-in-time copies and quick resynchronization on a volume basis.

3PAR SOFTWARE FAMILY

OPTIONAL SOFTWARE	VIRTUAL COPY	VIRTUAL COPY DBA	REMOTE COPY
FOUNDATION SUITE	SERVICE POOLS		
	FULL COPY		
EXPRESS SUITE	ACCESS GUARD		
	3PAR INFORM™ OPERATING SYSTEM		

3PAR also offers the Utility Storage data protection solution—a next-generation backup/restore capability for mission-critical Oracle databases based on 3PAR's breakthrough frozen image technology called 3PAR Virtual Copy. Virtual Copy allows you to take hundreds of instant snapshots of an original volume or other snapshots, each consuming a fraction of the space of a full physical copy. Virtual copies offer read and write capabilities, providing endless flexibility for test, backup, and business intelligence applications.

3PAR CUSTOMER SERVICES

3PAR's approach to Customer Services parallels the approach to Utility Storage: Offer a centralized management support model with unprecedented reliability, availability, and security. 3PAR has built the latest technologies into the service infrastructure using the Service Tools Platform to minimize human intervention, ensure real-time monitoring that anticipates problems before they happen, and enable quick, effective problem resolution.

3PAR Central support infrastructure provides remote assistance 24 hours a day, 7 days a week, 365 days a year. 3PAR Central utilizes Systems Engineers, Support Specialists, and the Service Tools Team (including the Engineers who developed our solutions) to resolve product issues quickly and efficiently.

CAPITALIZE
ON YOUR
INVESTMENT

With Utility Storage solutions from 3PAR, you can effectively consolidate storage assets and centralize information while reducing the costs associated with purchasing, deploying, upgrading, and managing your storage. Bottom line, 3PAR Utility Storage Solutions deliver meaningful value today and tomorrow in three important ways:

First, 3PAR enables you to significantly reduce the capital expense required to build and manage your enterprise storage infrastructure. 3PAR InServ Storage Server scalability is granular, and its affordable entry pricing enables enterprise IT departments like yours to match the purchase of storage equipment to the needs of your business. It eliminates the forced over-provisioning required by monolithic storage array vendors and delivers improved usable-to-raw ratios.

Second, the 3PAR solution offers dramatic operating expense savings, which benefit from consolidating the storage infrastructure from 150 storage devices to 75, 50, 25 or fewer. Cost savings are realized in centralized volume and performance management; a reduction of switch, SAN, and storage device management; and fewer storage architectures to learn and maintain.

Third, 3PAR enables new services that support a variety of critical functions—including data backup and restore, testing and training, decision support analysis and reporting, and software version control.

Utility Storage from 3PAR is here. By delivering features such as ultra-high performance, modular scalability, always-on availability, and high capacity density, 3PAR storage servers are the best choice for consolidation of your storage environment. Equipped with unparalleled capabilities to provision storage to multiple "tenants" on the storage server—features such as easy-to-use or autonomic management, secure access and administration, quality-of-service instrumentation and reporting—the 3PAR InForm Operating System can control your environment like no other. By reducing capital expenditures and operating costs while enabling new services, 3PAR Utility Storage solutions are the only choice for leading IT organizations.

3PAR
Serving Information

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SERVING
INFORMATION™