ELIMINATE

Banish waste from your datacenter

HP 3PAR Thin Provisioning Software

Solution brief

Start thin

HP 3PAR® Thin Provisioning Software is the most comprehensive thin provisioning software solution available, setting the gold standard for thin provisioning. HP 3PAR Thin Provisioning Software can make your organization more efficient and more green by enabling you to leverage dedicate-on-write technology to purchase only the disk capacity you actually need and only as you actually need it.

With Thin Provisioning, you can eliminate up-front capacity allocation. You can stop dedicating resources to each application. You can stop paying to house, power, and cool disks that might not be needed for months or years to come, or may never be needed at all.

The challenge: bolt-on thin provisioning solutions don't solve the problem

Studies show that organizations typically accept storage capacity utilization rates of 25% or less. With traditional storage, it is common for both application and storage administrators to overestimate, overpurchase, and overallocate capacity to avoid painful reconfiguration and downtime that can result from being too conservative when projecting application growth.

The benefits

HP 3PAR Thin Provisioning Software reduces CAPEX by:

- Minimizing up-front disk expenditures and implementing a pay-as-you-go approach
- Boosting capacity utilization to reduce disk spend over the long term
- Enabling organizations to leverage falling drive prices more effectively
- Reducing SAN ports and storage software fees (physical TB licensing)

HP 3PAR Thin Provisioning Software reduces OPEX by:

- Reducing floor space, power, and cooling costs by getting rid of unnecessary drives
- Eliminating application downtime for reconfiguration and capacity expansion
- Reducing related storage, system, and DB administrator workloads

HP 3PAR Thin Provisioning Software improves ROI by:

- Permitting more application deployments more affordably
- Reducing initial costs to accelerate short-term return on investment
- Allowing applications to be quickly and easily deployed

HP 3PAR Thin Provisioning Software solves this problem by breaking the traditional linkage between allocated and purchased capacity. Demand for thin provisioning solutions combined with increased attention to datacenter power consumption and its environmental impact has put pressure on many legacy vendors to introduce their own solutions, but these bolt-on implementations don't deliver the simplicity or the efficiency of HP 3PAR Thin Provisioning Software.

Reducing capacity purchases

Traditional (fat) provisioning

Volume
Written data
Purchased physical capacity

HP 3PAR Thin Provisioning Dedicate-on-Write

Volume
Written data
Free chunklet pool
Purchased physical capacity

The solution: the gold standard in thin provisioning

HP 3PAR Thin Provisioning Software produces dramatic efficiency gains that not only minimize up-front capacity purchases to help you meet Green IT targets, but which reduce the cost of housing, powering, cooling, and administering your storage—regardless of the kind of environment you are running. It is the only thin provisioning implementation that sets the gold standard by offering unique advantages not present with other solutions:

Autonomic vs. manual provisioning
HP 3PAR Thin Provisioning Software is designed to be autonomic—so you can just "set it and forget it." Capacity is dedicated and configured intelligently, just-in-time, and without active management. No more planning and configuring storage into intermediary pools, and no more compensating for unnecessary inefficiencies.

Reservationless vs. pre-dedicated pools
HP 3PAR Thin Provisioning Software uses a reservationless, dedicate-on-write approach provisioning that draws and configures capacity in fine-grained increments from a single free space reservoir without pre-dedication of any kind. Other vendors claim to offer thin provisioning but require a separate, pre-dedicated pool for each data service level. These pools are actually silos of allocated but unused capacity that can require manual setup, provisioning, and management which impacts thin provisioning ROI and flexibility.

Fine-grained vs. coarse allocation unit size
HP 3PAR Thin Provisioning Software uses an allocation unit size of just 16 KB, so you don't have to worry about small writes consuming megabytes or even gigabytes of capacity. Other vendors use coarse dedication unit sizes of 1 MB to 17 GB—sixty to a million times larger. This coarse allocation unit size can cause many volumes to fill during file system setup, even before the first bit of application data is ever written.
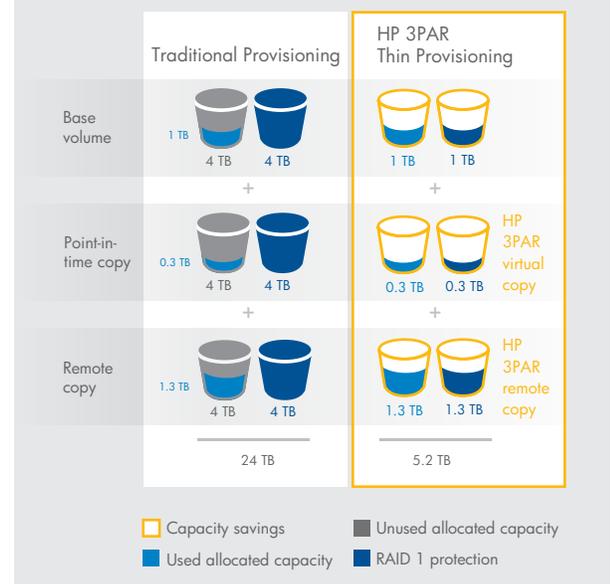
Clustered vs. dual-controller architectures
The unique, clustered HP 3PAR Architecture is designed to support thin provisioning by providing massive scalability within a single system, so additional capacity can be easily added as needed. This enables your organization to grow as you go instead of making a large up-front investment.

Built-in vs. bolt-on virtualization
HP 3PAR Utility Storage is built from the ground up to support thin provisioning by eliminating the diminished performance and functional limitations that plague bolt-on thin solutions. It is also the first storage platform to incorporate thin processing into array hardware with the introduction of the HP 3PAR Gen3 ASIC and the unique Thin Built In™ hardware design featured by all HP 3PAR F-Class and T-Class Storage Systems.

Example savings

	Traditional Provisioning	HP 3PAR Thin Provisioning
Base volume	1 TB / 4 TB / 4 TB	1 TB / 1 TB
Point-in-time copy	0.3 TB / 4 TB / 4 TB	HP 3PAR virtual copy 0.3 TB / 0.3 TB
Remote copy	1.3 TB / 4 TB / 4 TB	HP 3PAR remote copy 1.3 TB / 1.3 TB
	24 TB	5.2 TB

☐ Capacity savings ☐ Unused allocated capacity
☐ Used allocated capacity ☐ RAID 1 protection

For more information visit
www.hp.com and www.hp.com/go/3PAR.