

Reduce your data footprint and storage costs

HPE 3PAR Data Reduction Guarantee

HPE 3PAR hardware-accelerated data reduction technologies change the economics of flash and help you get the most out of your system's flash capacity while improving flash media endurance. If you're not satisfied with HPE 3PAR Data Reduction Guarantee, we will work to make you happy.

"Everyone's data is a little different"

Want to know more information on the impact of HPE 3PAR Adaptive Data Reduction technologies in your environment?

Get the answers you need from a non-disruptive assessment of your storage environment without conditions or restrictions. You walk away with a valuable report that pinpoints inefficiencies and ways to better utilize your current infrastructure, regardless of what equipment you're using today. Assessments are optional and not required to participate in HPE 3PAR Data Reduction Guarantee program. Contact your HPE Sales or Channel Partner Representative for more information.



HPE 3PAR StoreServ storage comes standard with HPE 3PAR Adaptive Data Reduction software, a collection of technologies designed to reduce your data footprint, as outlined on our website. When used alone or in combination, Zero Detect, deduplication, compression, and Data Packing make flash more affordable for your application and workload.

HPE 3PAR Data Reduction operations run inline for peak efficiency. This is not only important to increase the endurance of flash but to achieve consistent performance by not requiring resource-intensive post-process tasks.

On your journey to the all-flash data center, it only makes sense to make sure your flash storage offers superior capacity efficiency. With HPE 3PAR StoreServ All-Flash and the HPE 3PAR Data Reduction Guarantee, you can make sure that you'll get the most from your flash investment. If you're not satisfied with HPE 3PAR Data Reduction, we will work to make you happy.

For example, Hewlett Packard Enterprise will resolve issues and provide expertise related to data compaction or deliver additional storage if needed.¹

¹ Up to 30 TiB of raw capacity, excluding support and installation.

Why is HPE 3PAR so confident?

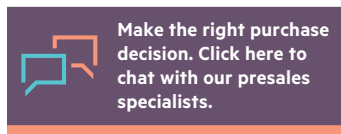
HPE 3PAR StoreServ storage set a new standard for total system efficiency that not only reduces the cost of flash but also extends flash media endurance, and offers the lowest TCO of any all-flash array. HPE 3PAR Adaptive Data Reduction technologies achieve advanced data reduction through leveraging built-in hardware capabilities.

For example, with HPE 3PAR Adaptive Data Reduction, the average customer savings by application are²

Application	Average savings
Virtual Desktop Infrastructure (VDI)	2.5–6.0X
Virtual Server Environments	1.5–2.5X
Databases	2.0–3.5X

² Based on HPE internal study, the average data reduction saving per workload is derived from HPE 3PAR telemetry data at the time of publication. The Data Reduction Guarantee may be available for other workloads with a storage assessment. Contact your HPE Sales or Channel Partner Representative for more information.

³ Based on HPE analysis of publicly available data at the time of publication.



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Zero Detect

Zero Detect reduces the amount of capacity required to store data without affecting performance because operations are driven by one of the many dedicated engines built into the HPE 3PAR ASIC. Zero Detect examines incoming write streams, identifies extended strings of zeros, and removes them—preventing unnecessary data from ever being written to storage. As a result, the duplicated data does not consume capacity on the array.

Deduplication

Like Zero Detect, deduplication on the HPE 3PAR StoreServ array uses the HPE 3PAR ASIC and is designed to reduce the amount of capacity needed to store data by reducing the amount of data actually being written to storage. However, unlike Zero Detect, the system is looking for data that is more complex and duplicative of data that has already been written to storage.

Compression

While Zero Detect and deduplication both reduce the amount of flash required to store data by eliminating unnecessary data, compression works by looking inside data streams for opportunities to reduce the overall size of the data set. HPE 3PAR ASIC plays an indirect role by offloading other resource-intensive operations from the CPUs, thus freeing them up to perform compression operations.

Data Packing

Data Packing combines the data reduction and flash efficiency technologies to maintain peak capacity efficiency over time. Data Packing takes random-sized pages (the result of the data being deduplicated and compressed) and packs them into small, fixed-size pages. This allows the system to attain a higher total system efficiency as compared to other all-flash platforms and improves endurance, as written data doesn't cross multiple internal pages, resulting in very efficient use of flash pages. Due to the incredible efficiency gained through Data Packing, HPE 3PAR StoreServ arrays offer one

of the highest raw to effective ratios among major all-flash arrays while maintaining high levels of performance.³

The combination of these data reduction technologies is key to reducing the cost of flash and making it an economical choice for nearly any application.

HPE 3PAR Data Reduction Guarantee details

- This guarantee applies to new HPE 3PAR all-flash array purchases (no PoC or demo units) until December 31, 2018.
- HPE 3PAR array must be sized and priced on the basis of HPE 3PAR Adaptive Data Reduction technologies by Hewlett Packard Enterprise or an authorized channel partner.
- HPE 3PAR array must run HPE 3PAR OS version 3.3.1 (or higher) with active deduplication and compression.
- Compression or encryption may not occur outside HPE 3PAR array. For example, data may not be compressed at the application layer or encrypted at the host or switch.
- Any workloads that include non-compressible data (i.e., audio and video files) are not eligible.
- This guarantee is valid for a 60-day period, which starts from the time HPE 3PAR array arrives at the customer site.
- HPE 3PAR array must be installed following [**HPE 3PAR StoreServ Storage best practices guide**](#) and data reduction technologies set up following the [**HPE 3PAR Adaptive Data Reduction technical white paper**](#).
- HPE 3PAR Service Processor configured for remote connectivity and connected to HPE 3PAR Central.
- The customer must work with Hewlett Packard Enterprise on good-faith remediation.

Learn more at [**hpe.com/in/en/storage/3par**](https://hpe.com/in/en/storage/3par)

