SPEND LESS ON ALL-FLASH STORAGE
HPE Store More Guarantee for HPE Primera
Navigating all the different Data Reduction ratios offered by every storage vendor out there can be difficult because no two are alike. That’s why HPE goes beyond the ratio to focus on actual data consumption and capacity. Everyone’s ratios are going to be different but with HPE you are guaranteed to Store More data in the same, or less capacity than any competitive offering.

HPE Primera compaction technologies change the economics of flash and help you get the most out of your system’s flash capacity while improving flash media endurance.

Store more data per terabyte of capacity with HPE compared to the competition. Get more for less with better overall efficiency. We’ve backed this up with guaranteed compaction ratios for your workloads. It’s as simple as that.

While flash has accelerated the transformation of the modern enterprise, it’s more expensive than spinning disks. On your journey to the flash-driven data center, it only makes sense to make sure your flash storage offers superior capacity and efficiency. With the HPE Store More Guarantee, you can be confident that you’ll get the most from your flash investment.

If you’re not satisfied with the storage efficiency for your workloads on your new HPE Primera system, we will work harder to meet your storage expectations. For example, Hewlett Packard Enterprise will resolve issues and provide expertise related to data compaction or deliver additional storage, if needed.

HPE Primera is an ultra-efficient flash storage system that dramatically changes the economics of flash and delivers a radically simple user experience for the enterprise. Hardware-accelerated compaction technologies are deeply integrated and automatically work to provide a complete solution with top-class efficiency to reduce the high cost and footprint of flash.

Designed for mission-critical applications, HPE Primera compaction technologies are inline for peak efficiency without performance penalties. This not only increases the endurance of flash but also achieves consistent performance by not requiring resource-intensive post-process tasks. In addition, running compaction inline provides predictable savings as data is loaded into your system and prevents running out of space due to deferred processing. You get storage efficiency without sacrificing the HPE Primera flash performance, which is available and affordable for every mission-critical workload or mixed-workload environment, respectively.
HPE PRIMERA DELIVERS ADVANCED COMPACtion CAPABILITIES

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 Primera 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 HPE Primera uses the 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 to avoid duplicating 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 helping eliminate unnecessary data, compression works by looking inside data streams for opportunities to reduce the overall size of the data set. The HPE Primera ASIC plays an indirect role by offloading other resource-intensive operations from the CPUs, freeing them up to perform compression operations. The customer can either choose to enable deduplication and compaction, or not. These features cannot be turned on or off separately.

Virtual Copy
Virtual Copy is the HPE Primera snapshot implementation used to provide a point-in-time Virtual Copy of data to share and protect data for almost any application simply and affordably. HPE Primera Virtual Copy is thin, non-duplicative, and reservationless.

The combination of these compaction technologies is key to reducing the cost of flash and making it an economical choice for nearly any application.
TERMS AND CONDITIONS

With HPE Primera, the average customer data compaction ratios by application are as follows:

1 Based on HPE internal study conducted in September 2019. The average data compaction savings per workload is derived from HPE 3PAR Storage telemetry data at the time of publication. HPE Store More Guarantee may be available for other workloads with a storage assessment. The data compaction ratios shown do not include HPE 3PAR snapshots. If snapshots are used, the data compaction ratio ranges will be higher. Contact your HPE sales or channel partner representative for more information.

TABLE 1. Data compaction ratios for HPE Primera and HPE 3PAR Storage systems by application

<table>
<thead>
<tr>
<th>Application</th>
<th>Data compaction ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual desktop infrastructure (VDI)</td>
<td>3.75–9.0X</td>
</tr>
<tr>
<td>Virtual server environments</td>
<td>2.25–3.75X</td>
</tr>
<tr>
<td>Databases</td>
<td>3.0–3.75X</td>
</tr>
</tbody>
</table>

All HPE Primera customers should experience data compaction ratios for the identified application workloads within the ranges indicated in Table 1, or Hewlett Packard Enterprise will provide expertise related to data compaction or additional storage capacity necessary to achieve the indicated range. That is the HPE Store More Guarantee.

The full terms and conditions of the HPE Store More Guarantee for HPE Primera are:

- It applies to new HPE Primera All-Flash array purchases, respectively, (no proof of concepts or demo units) until December 31, 2020.
- The HPE Primera array must be sized and priced based on the HPE Primera reduction technologies by Hewlett Packard Enterprise or an authorized channel partner.
- The HPE Primera array must run the HPE Primera OS version 4.0 (or higher) with active data reduction.
- Compression or encryption may not occur outside HPE Primera 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 (such as, audio and video files) are not eligible.
- The customer must migrate a significant portion of their data to the HPE Primera array to see statistically accurate data reduction (for instance, migrating a single VM shows less deduplication than migrating 10 VMs).
- The HPE Primera array must be installed while following the HPE Primera best practices and data reduction technologies must be enabled. These best practices include but are not limited to placing data types in the right performance policy (such as SQL data in the SQL policy).
- HPE Primera must be configured for remote connectivity and must send telemetry data to HPE InfoSight.
- This guarantee is valid for a 180-day period, which starts from the time the HPE Primera array arrives at the customer site.
- The customer must work with Hewlett Packard Enterprise on good-faith remediation. For example, HPE may provide expertise related to data compaction or deliver additional storage if needed to reach the identified ranges of data compaction ratios for the identified application workloads.

LEARN MORE AT
hpe.com/storage/hpeprimera

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a00074724ENW, November 2019, Rev. 3