



**HPE** Alletra Storage

# Store more for less

HPE StoreMore Guarantee for HPE GreenLake for Block Storage  
built on HPE Alletra Storage MP

**HPE**   
**GreenLake**

**The HPE StoreMore Guarantee for HPE Alletra Storage MP offers verified long-term storage efficiency for your workloads—reducing costs, saving energy, and decreasing your data center footprint.**



HPE Alletra Storage MP is an ultraefficient flash storage solution that offers state-of-the-art data reduction and data compaction technologies to reduce storage capacity utilization and lower TCO without compromise. Together, these always-on technologies change the economics of flash and have been designed to help you get the most out of your system's flash capacity while dramatically improving flash media endurance.

Hewlett Packard Enterprise stands behind the powerful data efficiency technology of HPE Alletra Storage MP with a data compaction ratio guarantee of at **least 4:1**, calculated as a ratio of effective to usable capacity, in aggregate, across all reducible data.<sup>1</sup> No preassessment or program fee is required, and the guarantee is valid for the term of your support contract. And if your HPE Alletra Storage MP array fails to deliver on this data reduction guarantee, we will make it right.

HPE also offers customized guarantees, valid for a year, for customers requesting a guarantee for a set amount of effective capacity.

With the HPE StoreMore Guarantee, you can be confident that you'll get the most from your storage investment. You get guaranteed effective capacity that helps ensure you're buying just the amount of storage you need when you need it. And you don't have to worry about buying and undersized—or oversized—array now or in the future.

**Data efficiency guarantee for HPE Alletra Storage MP**

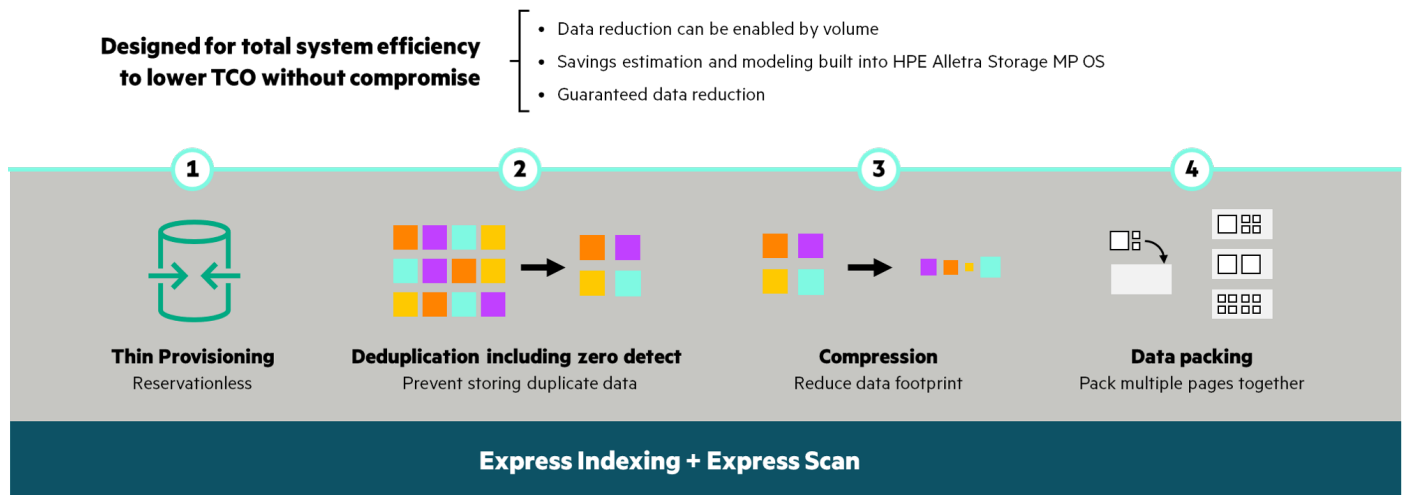
- Guaranteed data compaction ratio guarantee of at least 4:1—valid for the term of your support contract
- If your HPE Alletra Storage MP system doesn't deliver on the promised data efficiency ratio, we'll make it right
- Experience a risk-free approach to more storage, more value, and more efficiency—no matter how your business grows



<sup>1</sup> 4:1 data compaction ratio guarantee is calculated as a ratio of usable to effective capacity, in aggregate, across all reducible data.



# HPE Alletra Storage MP delivers advanced data reduction and data compaction capabilities



**Figure 1.** HPE Alletra Storage MP data reduction

HPE Alletra Storage MP data reduction combines deduplication and compression to help maximize space savings (Figure 1). With data reduction volumes, the incoming data is checked for duplicates before compression.

- **Deduplication with Express Indexing:** HPE Alletra Storage MP uses a high-performance and low-latency hashing engine for deduplication that can lead to massive savings over standard deployment methodologies and a much smaller performance overhead when deduplication is enabled. Deduplication employs Express Indexing, a mechanism that provides extremely high-performance lookup tables for fast detection of duplicate write requests.
- **Compression:** HPE Alletra Storage MP implements an extremely efficient, modern compression algorithm that can deliver supreme performance for both compression and decompression tasks while yielding excellent compression savings. The block storage implements Express Scan, a technology that further reduces the CPU overhead associated with compression. This is achieved by inspecting blocks to determine their entropy and selecting the compression level to balance the space saving with the CPU utilization optimally.
- **Data packing:** HPE Alletra Storage MP optimizes physical space by helping eliminate the unused white space issue of fixed block size implementations and creates larger, more media-efficient write sizes than other approaches improving both performance and media endurance.

In addition to data reduction, HPE Alletra Storage MP offers additional capacity-efficiency technologies including Thin Provisioning, thin clones, thin reclaim, Virtual Copy, and other technologies.

- **Thin Provisioning:** Thin Provisioning makes storage more efficient and more compact by dedicating space on demand, allowing you to purchase only the disk capacity you need, when you need it. Thin persistence is a feature that keeps virtual volumes (VVs) and read/write snapshots of VVs small by detecting pages of zeros during data transfers and not allocating space for the zeros. Thin copy reclamation keeps storage as lean and efficient as possible by reclaiming the unused space from deleted Virtual Copy snapshots.
- **Virtual Copy:** Virtual Copy is the HPE Alletra Storage MP snapshot implementation used to provide a point-in-time Virtual Copy of a VV to share and protect data for almost any application simply and affordably. Virtual Copies are thin, nonduplicative, and reservationless with only one copy of a changed block. Thanks to efficient metadata handling, you can configure thousands of read-only and read-write snapshots.



## Spend less on all-flash storage

Let HPE demonstrate how you can count on long-term storage capacity and energy savings with the HPE StoreMore Guarantee for HPE Alletra Storage MP.

If your HPE Alletra Storage MP array does not achieve the **4:1 data compaction ratio**, HPE will provide expertise related to data efficiency, additional storage capacity needed to reach the targeted data efficiency, or other compensation, at our discretion. The guarantee is valid for the term of the support contract.

Refer to the HPE StoreMore Guarantee terms and conditions document provided by your HPE sales representative or channel partner for full details.

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