Breakthrough performance for application workload demands

HP 6G SATA Value Endurance (VE) Solid State Drives

Part of the Read Intensive family, HP 6G SATA VE Solid State Drives (SSDs) with HP SmartCache provide 4x more performance in HP ProLiant servers.

Read Intensive SSDs

- Workload-optimized for better business outcomes
- Better performance over previous generation
- Proven reliability—meets rigorous HP ProLiant qualifications with 2.4 million test hours

Meet your storage performance challenges now

Data volumes have exploded over the past twenty years, and storage hasn't been keeping up. Simply adding more storage to your SAN for data won't keep you ahead of the competition. You need to be able to access data, analyze it, and act on it—often in the blink of an eye.

More specifically, application performance suffers, despite virtualization and other efforts around server optimization. Optimizing applications or adding more hard disk drives, memory, and servers requires significant capital expense and/or operating expenses—yet these actions may not fully address the problem.

HP delivers

Only HP delivers the right compute, for the right workload, at the right economics—every time. And that includes the HP 6G SATA SSDs.

Low-cost, high-performance

HP 6G SATA Enterprise Value SSDs are designed to help you get the most HP ProLiant server performance at a low cost. Solid-state innovation makes these SSDs ideal for read performance-driven workloads like:

- Read caching
- Database acceleration
- Web servers
- Software-defined storage implementation
  - Microsoft® Windows® Storage Spaces
  - VMware® VSAN boot/swap

Built-in reliability, capacity choice

HP 6G SATA Enterprise Value SSDs meet the most rigorous HP ProLiant qualifications with 2.4 million test hours. HP firmware also enables compatibility and consistency with HP ProLiant servers. These SSDs are fully qualified options that are integrated with ProLiant servers and software. To make sure you have the newest HP 6G SATA SSDs to do the job right, you can choose from four value endurance (VE) capacities: 120 GB, 240 GB, 480 GB, and 800 GB.

What Read Intensive means

HP 6G SATA VE SSDs offer you the following capabilities that translate readily into business benefits:

Better performance
- 2X > previous 6G SATA VE SSDs for writes
- Up to read 58,000 IOPS (random 4 KiB, Q16)
- Up to write 35,000 IOPS (random 4 KiB, Q16)

Workload optimized
- Read-intensive workloads including read caching and Web servers

Endurance
- 2.5 Drive Writes Per Day (DWPD) for 120/240/480 GB for five years based on a full random input
- 1.3 DWPD for 800 GB for five years based on a full random input
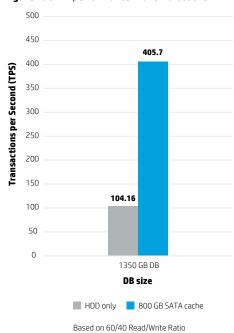
Enterprise reliability
- Fully tested and qualified to provide compatibility with HP ProLiant servers

Breakthrough Performance

OLTP performance
• 4X performance improvement with HP SmartCache and HP 6G SATA VE SSDs

Figure 1. OLTP performance with SmartCache

Based on 60/40 Read/Write Ratio

System configuration
• HP ProLiant DL380 Gen9 Server

• 2 x Intel® Xeon® Processor E5-2680v3

• 6 x 8 GB DIMMs

• 1 x 800 GB 6G SATA VE SSD

• HP SmartCache

Why choose HP SSDs

HP Enterprise SSDs are suited to enterprise environments with highly random data types under a variety of write/workload applications. SSDs provide significantly better random read-and-write input/output operations per second (IOPS) compared to rotating hard-disk drives (HDDs).

While sequential read-and-write throughput is also improved over HDDs, the greatest benefit comes with random data applications. As a result, high-performance, low-latency, and low-power SSDs provide significant system benefits for applications that previously over-provisioned HDD capacity to achieve better performance. To tap their potential, applications must read and write more data, faster than ever.

SSDs are well suited for your Gen9 server
The HP ProLiant DL380 Server is purpose-built for flexibility, efficiency, and manageability. With Gen9 enhancements, the DL380 offers greater reliability, serviceability, and continuous availability, backed by a comprehensive warranty. Call it tomorrow's benchmark for multi-workload compute, enabling you to deploy a single platform to handle a wide variety of enterprise workloads.

HP SmartCache

HP SmartCache is an HP Smart Array Controller-based caching solution for directly attached storage environments. It caches the most frequently accessed data onto lower latency SSDs to turbo-charge application workloads and optimize performance with a modest storage investment. In Gen9, HP Smart Array Controllers can not only perform read acceleration but they can also accelerate write operations. HP Smart Cache integrates seamlessly into data centers using common HP Smart Storage Administrator. Its algorithm resides in the firmware; no change is required at the OS or application level.

With HP SmartCache, you get increased utilization and more efficient use of your investment in HP ProLiant technology. Based on our internal OLTP-based benchmark of 60 percent reads and 40 percent writes, the HP SmartCache was able to accelerate the reads and writes by a factor of 4x (see figure 1) using 6G SATA VE SSDs.

Support services enable success

Simplify implementation and support
To streamline installation and enhance ongoing support for your HP 6G SATA SSDs, we recommend the following service offerings:

• **HP Installation and Startup Service**—HP Services offers complete installation and implementation support—including global rollout capabilities—to get your HP server-based solution up and running rapidly with reduced business disruption. You can choose from all server options and storage for inclusion in the server: Microsoft, Linux®, Solaris, and VMware operating software, plus HP Insight Control software management solutions.

• **Hardware support**—You can cover all the options installed in your server with a single convenient service package. HP Care Pack Services for HP ProLiant servers and storage systems provide support for all HP-branded hardware options qualified for inclusion in your server at the time of purchase or afterward. Any additional HP Qualified Options installed within the server are covered at the same service level and for the same period as the server.

**Learn more at
hp.com/go/solidstate**

**Sign up for updates
hp.com/go/getupdated**

Share with colleagues   Rate this document