BUSINESS BRIEF

NVMe Solutions

Refresh Your PC Fleet with Intel® Optane™ Memory

Improve system responsiveness without breaking the bank

Intel® Optane™ memory delivers better overall system responsiveness across everyday tasks than adding additional RAM.[1]

Industry Strategic Challenges

PC fleet management comes with big challenges and hard decisions. They include optimizing client configurations for varied workloads, while maximizing refresh dollars. With today's multiplicity of applications and explosion of data, keeping users productive requires speed, flexibility, and reliable performance. Two key factors in meeting these needs are memory and storage.

The answer to mounting performance demands has typically been to increase DRAM. This is an additive solution that puts a big dent in the budget and is often only effective for the short term. Some opt to use better performing solid state drives (SSDs) but sacrifice the capacity of hard disk drives (HDDs) and their much lower cost. Either of these approaches enables PC clients to work harder. Now there's a way for them to work harder and smarter—by substituting low-cost Intel® Optane™ memory for higher-cost DRAM and storage media without compromising on system speed or storage capacity.

This innovative technology, unique to Intel, is a simple, affordable solution that delivers HDD capacity with responsive, SSD-like speed. By accelerating the system, it allows users to quickly and reliably access the applications and tools most important to their productivity, giving fleet managers a new way to improve system responsiveness while containing refresh costs.

Intel® Optane™ memory is compatible with 8th and 7th Generation Intel® Core™ vPro™ processor-based systems. Major OEMs offer desktop and mobile platforms qualified and pre-configured with Intel® Optane™ memory. And the M.2 form factor makes upgrading to a higher capacity Intel® Optane™ memory module simple and fast as fleet needs change.

What is Intel® Optane™ Memory?

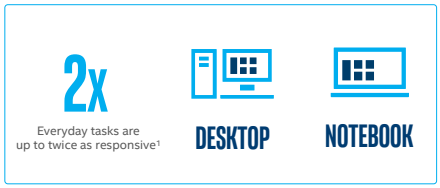
INTEL® 3D XPOINT™ MEMORY MEDIA + INTEL® RAPID STORAGE TECHNOLOGY = INTEL® OPTANE™ MEMORY

Business Drivers and Desired Outcomes

- Increased productivity
- Competitive speed-of-business
- Cost-effective refresh, from BOM throughout client lifecycle
- Support for users' unique work patterns and requirements
- Encryption support for data protection
- Easy scaling

Business Value

In addition to low initial cost, Intel® Optane™ memory is easy for IT to deploy and manage. On the performance side, there's a compelling case for adding Intel® Optane™ memory rather than more DRAM. In fact, Intel® Optane™ memory delivers better overall system responsiveness (up to 2X) across everyday tasks than adding additional DRAM[1].



Intel® Optane™ memory delivers improved responsiveness by remembering – and accelerating – the applications and tasks used most often by individual users.

Digital Transformation and Business Innovation

Intel® Optane™ memory is changing traditional thinking about how to cost-effectively accelerate systems. It offers fleet-wide benefits no matter what the existing mix of memory and storage—for both desktops and laptops. It allows transformation in user productivity when performing everyday tasks, with a simple, affordable solution that erases the trade-off between cost and performance.

One of the most significant innovations of Intel® Optane™ memory is its use of behavioral intelligence to learn and remember individual work patterns and tune individual clients to speed up the user's most-accessed applications. This work pattern data remains even when the PC is turned off, enabling workers to start each day with optimized PC performance.

Ensuring Security

Intel® Optane™ memory supports essential IT tasks most enterprises perform as part of their security requirements.

- **Encryption:** Intel® Optane™ memory is fully compatible with Microsoft BitLocker*.[2]
- **Data sanitization:** Secure erase operations can be administered on the Intel® Optane™ memory module for complete data sanitization.[3] This is the same process used on SSDs.
- **Re-imaging:** Deploying a corporate OS image onto systems equipped with Intel® Optane™ memory can be performed with the same tools used with systems with a single SSD or HDD alone.

Solution Ingredients

- Intel® Optane™ memory media
- Intel® Rapid Storage Technology
- Standard M.2 form factor module

Intel Technology Foundation

Intel has been pioneering technologies to meet IT and business needs—and opportunities—created by sharply rising data volume. Building on experience with flash cell technology, Intel® 3D NAND is architected for the highest areal density, with smaller cell size and minimal wasted space. This allows capacity scaling and higher performing apps. Next-level performance with Intel® Optane™ technology is made possible through Intel 3D XPoint memory media and its unique cross point structure and breakthrough materials that eliminate the need for transistors.

Where to Get More Information

- For more information about Intel® Optane™ Memory: https://www.intel.com/content/www/us/en/architecture-and-technology/optane-memory.html
- For more information about Intel® Optane™ technology: www.intel.com/optane

[1] Tests performed by Intel. As measured by SYSmark* 2014 SE Responsiveness Subscore comparing 8th Gen Intel® Core™ i5+ 8500 vPro™ Processor with HDD (16GB Intel® Optane™ memory module + 8GB RAM) vs. 8th Gen Intel® Core™ i5-8500 vPro™ Processor with HDD (16GB RAM).

[2] https://docs.microsoft.com/en-us/windows/security/information-protection/bitlocker/bitlocker-overview

[3] https://www.intel.com/content/www/us/en/it-management/intel-it-best-practices/secure-erase-for-ssds-helps-sanitize-data-boost-efficiency-brief.html

Performance results are based on testing as of July 20, 2018 and may not reflect the publicly available security updates. See configuration disclosure for details. No product can be absolutely secure.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors.

Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance. Consult other sources of information to evaluate performance as you consider your purchase.

Intel technologies features and benefits depend on system configuration and may require enabled hardware, software, or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer, or learn more at www.intel.com/optane.

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