

# Resetting the Bar at Paul Hastings

Platforms based on the Intel® Xeon® processor E5 family help a leading law firm double its consolidation ratio and consolidate 16 data centers down to four

Paul Hastings, LLP, an international law firm with 20 offices situated across Asia, Europe, and the U.S., has a living archive containing tens of millions of documents that must be readily available to the firm's attorneys around the world. To serve these growing needs while also meeting its global IT consolidation goals, Paul Hastings used platforms based on the Intel® Xeon® processor E5 family to provide global access from four virtualized, high-density data centers.



## PAUL HASTINGS

"The Intel® Xeon® processor E5 family has made a big difference in our ability to deliver higher density and higher performance. We can now deploy about twice as many virtual machines per blade to support our consolidation initiative."

— Searl Tate,  
Director of Engineering,  
Paul Hastings

### CHALLENGES

- **Consolidate worldwide infrastructure.** Reduce 16 major data centers to four hub data centers while accommodating business growth.
- **Increase computing density.** Capitalize on the latest processing technologies to improve virtualization and power high-performance processing.
- **Control costs.** Provide a fast, reliable user experience while controlling IT costs.

### SOLUTIONS

- **HP blade servers with the Intel Xeon processor E5 family.** The Paul Hastings IT group refreshed its infrastructure with HP ProLiant BL460c Gen8 Server Blade\* platforms based on the Intel Xeon processor E5 family.
- **Intel® Solid-State Drives (Intel® SSDs).** Riverbed® Granite™ appliances based on Intel SSDs enable the firm to centralize storage at the four hub data centers while presenting data at smaller, edge data centers as if it were local.

### TECHNOLOGY RESULTS

- **Greater processing capacity.** Using platforms based on the Intel Xeon processor E5 family, Paul Hastings configured systems with 50 percent more cores and twice the memory for application processing.
- **Increased data center density.** With more powerful blades, the IT group doubled the number of virtual machines per server to improve consolidation.

### BUSINESS VALUE

- **Global IT consolidation.** The firm is reducing the number of data centers by 75 percent while supporting revenue generation by providing excellent performance and worldwide access to essential information.
- **Controlled costs.** A dense, highly virtualized infrastructure helps drive down software licensing, energy, and other operating costs while reducing the need to buy and manage physical servers.
- **Greener enterprise.** Virtualization and consolidation are helping Paul Hastings reduce energy consumption by 57 percent and saving hundreds of thousands of dollars on energy costs annually.

Information management is a critical service for a top law firm with customers around the world—not only to keep track of legal files but also to share expert knowledge in multiple areas of the law. "Knowledge management is the fastest-growing component of our information management system," says Searl Tate, director of engineering at Paul Hastings. "Our goal is to maximize the value of our enormous archive to empower our attorneys with the information they need, including exemplar documents and other best practices."

The firm was dealing with rapid growth in both structured and unstructured data, requiring greater storage and processing capacity to accommodate the demand for information services. At the same time, the IT group had to consolidate IT resources to support the planned move from 16 major data centers to four hub centers. "We wanted to eliminate a vast number of file servers where key information resides," says Tate. "But that information still needed to be stored, processed, and made available. Consequently, we needed to implement a higher-density computing environment in the remaining four data centers."



## Platforms based on the Intel® Xeon® processor E5 family provide the performance, memory, and throughput needed to access legal information worldwide

The Paul Hastings IT team had begun a large-scale server virtualization project a few years earlier. Now it needed to reset the bar. “Traditionally, we’ve been very conservative in the number of virtual machines on each host system,” says Tate. “But we realized our older metrics for virtualization had to be increased if we were going to do more with fewer sites, and that required more powerful systems. HP platforms based on the Intel Xeon processor E5 family caught our attention with potential performance gains of up to 80 percent over previous-generation Intel Xeon processor-based servers.”

### Supporting Consolidation with a Dense Infrastructure

Tate saw that the IT team could greatly improve physical and virtual server density by deploying HP ProLiant BL460c Gen8 Server Blades based on the Intel Xeon processor E5 family. Using these dual-socket blade servers with the Intel® processors, the IT group has 16 physical cores (or 32 logical cores) per server, a 50 percent increase over previous-generation servers. With the Intel Xeon processor E5 family, the IT team was also able to double the memory capacity per server. “The Intel Xeon processor E5 family has made a big difference in our ability to deliver higher density and higher performance,” says Tate. “We can deploy about twice as many virtual machines per blade to support our consolidation initiative.”

The Intel processor-based HP blade servers run the firm’s Autonomy iManage\* document management system, as well

as the current versions of Microsoft SQL Server\*, Microsoft Exchange Server\*, and Microsoft Office SharePoint\* Server for collaboration and communication.

Enterprise data is consolidated and protected in the four hub data centers yet remains highly available to users through Riverbed Granite appliances with Intel Solid-State Drives (Intel SSDs). Located in edge data centers, the Granite appliances improve performance for remote users by rapidly retrieving requested data from the hubs and presenting a cached copy of the data to the requesting local server. “The Intel SSDs help provide a very fast end-user experience to remote users,” says Tate. “Those users can access our knowledge base without requiring us to maintain large server and storage footprints at the edge sites.”

### Streamlining Operations and Reducing Costs

The dense infrastructure based on the Intel Xeon processor E5 family is helping the firm achieve the goal of consolidating data centers while also delivering significant cost savings. The consolidated, highly virtualized infrastructure streamlines administration and reduces energy costs by reducing the overall number of physical machines. “The four hub data centers are so much greener and more energy efficient that we’re saving hundreds of thousands of dollars annually on power alone,” says Tate. The densely packed, two-socket blade servers also help the firm reduce virtualization licensing costs, which are tied to socket counts.

### Increasing Resiliency and Security to Protect Revenue

Uninterrupted access to documents and the company’s library of expertise is essential, and the new servers help ensure availability

## LESSONS LEARNED

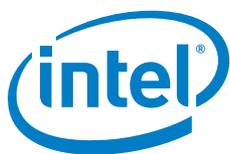
“Use Intel Xeon processors to take advantage of new capabilities while protecting your investment in older technologies,” says Searl Tate, director of engineering at Paul Hastings. “By capitalizing on Intel® Virtualization Technology (Intel® VT) FlexMigration, you can have multiple Intel Xeon processor generations all coexisting in the same virtualized server farm without having to do any segregation.”

worldwide. Each of the HP chassis provides hardware redundancy and clustered nodes to deliver sustainable uptime. “We have an expectation that an attorney can have quick access to any document that exists anywhere,” says Tate. “Our enterprise runs on Intel Xeon processors because they help us deliver the availability that we require.”

Hardware-based security technologies built into the Intel Xeon processor E5 family—such as Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) for encryption speedups and Intel® Trusted Execution Technology (Intel® TXT) for malware protection—can help ensure system security, a big concern for the law firm and its clients. “We protect our revenue stream by providing safe, continuous access to tools that directly impact revenue generation,” says Tate. “The security capabilities of the Intel processors are an important part of that story.”

Paul Hastings considers the consolidation effort an ongoing success. “When we were faced with a pivotal IT challenge, we knew where to go for answers,” Tate says. “HP and Intel are valuable sounding boards as well as trusted suppliers that we have been using for years. When you have a great track record, there is every reason to stick with the team.”

Find a solution that is right for your organization. Contact your Intel representative, visit [Business Success Stories for IT Managers](#), or explore the [Intel IT Center](#).



Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) requires a computer system with an AES-NI enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. AES-NI is available on select Intel® processors. For availability, consult your reseller or system manufacturer. For more information, see <http://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni>.

No computer system can provide absolute security under all conditions. Intel® Trusted Execution Technology (Intel® TXT) requires a computer with Intel® Virtualization Technology, an Intel TXT-enabled processor, chipset, BIOS, Authenticated Code Modules and an Intel TXT-compatible measured launched environment (MLE). Intel TXT also requires the system to contain a TPM v1.s. For more information, visit <http://www.intel.com/technology/security>.

Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, and virtual machine monitor (VMM). Functionality, performance, or other benefits will vary depending on hardware and software configurations. Software applications may not be compatible with all operating systems. Consult your system manufacturer. For more information, visit <http://www.intel.com/go/virtualization>.

This document and the information given are for the convenience of Intel’s customer base and are provided “AS IS” WITH NO WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. Receipt or possession of this document does not grant any license to any of the intellectual property described, displayed, or contained herein. Intel® products are not intended for use in medical, lifesaving, life-sustaining, critical control, or safety systems, or in nuclear facility applications.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations, and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more information, go to <http://www.intel.com/performance>.

Intel does not control or audit the design or implementation of third-party benchmark data or Web sites referenced in this document. Intel encourages all of its customers to visit the referenced Web sites or others where similar performance benchmark data are reported and confirm whether the referenced benchmark data are accurate and reflect performance of systems available for purchase.

© 2013, Intel Corporation. All rights reserved. Intel, the Intel logo, and Xeon are trademarks of Intel Corporation in the U.S. and other countries.

\*Other names and brands may be claimed as the property of others.

0213/LJ/TDA/XX/PDF

328072-001US