

**Selecting Server Processors to Reduce Total Cost**

Intel IT is standardizing on Intel Xeon processor X5570 for two-socket servers for design computing and enterprise server virtualization. Its testing and analysis demonstrates that the newest high-end Intel Xeon processors based on Next-Generation Intel® Microarchitecture (Nehalem) can significantly enhance server performance, providing an opportunity for Intel IT to reduce total cost of ownership by 42 percent. »

**INTEL NEWS**

**Why Choose Intel® Server Products?**

Watch this YouTube video to see

**TOP INTEL CONTENT**

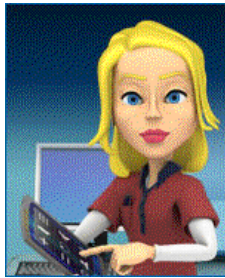
- » [First the Tick, Now the Tock: Next Generation Intel® Microarchitecture Nehalem](#)
- » [Intel Xeon Processor 5500 Series Product Brief](#)
- » [Intel and Microsoft Complementary Virtualization Technologies](#)

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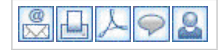
**HOTLIST**

[New Intel® Xeon® Processor Increases Server Efficiency and Capabilities](#)



**The Application Addict**

Your mission-critical business applications require servers that can handle peak loads and run without delay. It's all about performance, because your business users and customers need your servers to process information in an instant.



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As an Application Addict, you know that application performance is the engine that makes your business go and grow. It makes your day-to-day business operations possible and allows you to create new products and services. Application performance is what puts the latest information at the fingertips of your employees so they can respond to inquiries, provide quotes, and make the decisions that power your business.

Application performance and efficiency don't always go hand-in-hand, however. With many data centers reaching their power and cooling capacity it's important that IT administrators deploy servers that can meet the performance requirements of their applications without increasing the power and cooling burden.

The Intel® Xeon® processor 5500 series delivers the kind of intelligent performance you need thanks to some innovative new technologies.

Intel Turbo Boost Technology adapts processor frequency to application needs, scaling performance to meet peak performance demands. It also allows specific cores within each processor to operate above rated frequency within a set range, increasing frequency when needed to increase execution speed.

Intel Turbo Boost Technology and Intel Intelligent Power Technology enable policy-based control that allows processors to operate at optimal frequency and power. The operating system can make this determination automatically, or administrators can manually designate in BIOS which applications require high-frequency processing and which should be executed at lower frequencies to conserve power.

Intel Hyper-Threading Technology enables simultaneous multi-threading within each processor core, up to two threads per core or eight threads on a quad-core processor, for those applications that lend themselves to parallel, multithreaded execution. Hyper threading reduces computational latency and makes optimal use of every clock cycle. For example, while one thread is waiting for a result or event, another thread is executing in that core, to minimize down cycles.

To achieve top application performance, you need optimal processing speed plus enough data bandwidth to keep each CPU running at capacity. The Intel Xeon processor 5500 series features new Intel QuickPath Technology that delivers top performance for bandwidth-intensive applications. This new scalable, shared memory architecture delivers memory bandwidth leadership and up to 3.5x the bandwidth of previous-generation processors by connecting processors and other components with a new high-speed interconnect. Intel QuickPath Technology is designed to unleash the full performance of the Intel Microarchitecture codename Nehalem and future generations of Intel multi-core processors.

The benefits of Intel QuickPath Architecture are enhanced with the use of the Intel Smart Cache Technology. This technology now incorporates a large inclusive shared L3 cache that boosts performance while reducing traffic to the processor cores. This eliminates unnecessary snoops, reducing latency, and speeds processing.

**Resources For You**

**Nehalem EP Intel Xeon 5500 Processor Animation**  
This three-minute animation includes an overview of the product; plus information on Turbo boost, Hyper-Threading and FlexMigration Technologies

**Intel Xeon Processor 5500 Series Product Brief**  
IT needs to refresh existing infrastructure with servers that deliver more performance and scalability, more efficiently. The Intel Xeon processor 5500 series provides a foundation for IT management to refresh existing or design new data centers to achieve greater performance while using less energy and space, and dramatically reducing operating costs.

