



**Is there more to your server  
than a desktop PC on its side?**



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# Yes. A real server based on the Intel® Xeon™ processor helps give your company more dependability, more value, and more performance.

## More Dependability.

PCs have their place – on workers’ desktops – but you rely on your server to move, store, and manage indispensable company and customer information. Real servers based on Intel® Xeon™ processors offer high reliability and dependability features that just are not available on desktop PCs. A real server will help keep your business-critical applications up and running with less downtime, which means fewer interruptions to your productivity, revenues, and customer goodwill.

Dependability Features	Real Server Benefits
Intel® server processor validation	The Intel® Xeon™ processor has been rigorously tested by Intel under extensive server operating conditions to provide peace of mind for your business; desktop PC-based systems do not receive the same level of server testing.
Intel® x4 Single Device Data Correction (SDDC) memory technology	In the event of a single memory device failure, Intel x4 SDDC technology allows continued server operation to help protect your data against loss.
Processor redundancy	In the rare event of a processor failure, a second processor can take over the workload of a processor that has become unavailable, which helps keep your critical data accessible.
Network scalability with built-in redundancy	Real servers can accommodate multiple gigabit network connections. If one connection fails, another can take its place. A typical desktop PC only has bandwidth to fully support a single gigabit connection.

## More Value.

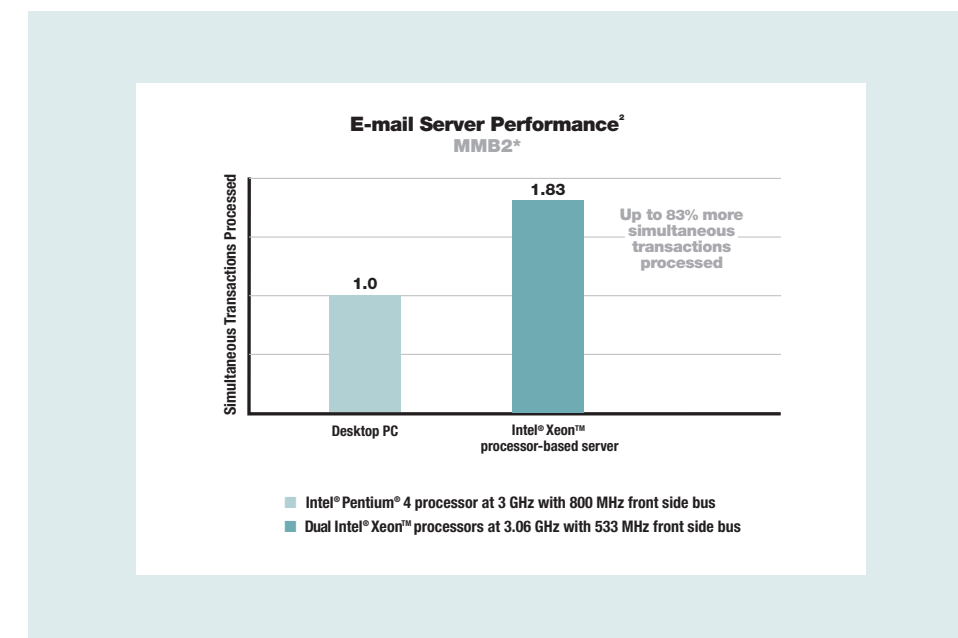
A real server based on two Intel Xeon processors helps benefit your bottom line. Because real servers are more reliable, they help improve productivity, reduce operating expenses, and lower maintenance costs. They also generally have more growing room than PCs, which can lead to longer equipment life. All of this helps deliver a higher return on your IT investment.

Value Features	Real Server Benefits
Greater expansion capability	Add a second CPU, more memory, or additional peripherals to help extend your server’s life and customize it to your needs.
Server consolidation	Increase the return on your IT investment by consolidating multiple lower performing systems onto one more capable real server.
Enhanced reliability	A dependable real server is less expensive to operate and maintain.
Outstanding price/performance	Process more data, faster, to optimize your server platform investment.

## More Performance.

A real server based on the Intel Xeon processor has proven performance advantages over PCs. However, total system performance goes beyond processor speed. A real server also has greater memory capacity and data “trafficking” capability than PCs, allowing it to move data in and out of the system faster.

Performance Features	Real Server Benefits
Dual processor capability	Servers are more likely to perform multiple tasks at the same time. Two processors working together can process more of these tasks than can a single processor.
PCI-X Input/output (I/O)	Input/output bandwidth determines how much data can be ‘pumped’ through your server. With a theoretical I/O bandwidth up to 6X greater than a desktop PC, real servers can process your data more efficiently.
Greater memory capacity	Installing additional memory can increase server performance and extend the useful life of your server.



*“With the prior network, it was impossible to know if the computer failed, so downtime was an ongoing problem. With Intel® Server Management monitoring capabilities and redundancies built into the network, we can diagnose and repair problems before the parts fail, virtually eliminating any shut-downs in production.”*

**Ruben Garcia Bayon**  
 Sistemas Tecnicos Interactivos S.L. (Spain)

*“With customers all over the globe, we have increased our e-mail and file transfer access while saving money over traditional mail and fax costs. The money we’ve saved by going to server technology instead of dial-up fax and phone services has been significant.”*

**Paul Martineau**  
 IT Manager  
 Tessier Translations (Canada)



# Move up to a real server based on the Intel® Xeon™ processor for more dependability, value and performance.

## Real Server vs. Desktop PC Comparison

Feature	Desktop PC	Intel® Xeon™ Processor-based Server	Benefit
Number of processors supported	1	1-2	Dual processors enable increased performance over a desktop PC of up to 83% as measured on MMB2.
Intel® server processor validation	N/A	Yes	Enjoy greater peace of mind from the company responsible for over 80% of today's installed server processors.
Theoretical PCI I/O bandwidth	Up to 512 MB/sec	Up to 3.2 GB/sec	PCI-X offers faster data transfer with up to 6x the I/O bandwidth of a PC.
PCI I/O speed	33 MHz	133 MHz	Faster I/O speeds to process and move your data faster.
Intel® x4 SDDC memory technology	N/A	Yes	Allows continued memory operation in the event of a single memory device failure.
Networking speed	Up to 1 Gbps/sec	Up to 8 Gbps/sec	Faster network speed to move data between client and server more efficiently.
Network scalability	One gigabit connection	Multiple gigabit connections	Real servers feature multiple gigabit network connections. If one connection fails, another can take its place.
Processor redundancy	N/A	Available <sup>1</sup>	A second processor can take over the workload of a processor that becomes unavailable, ensuring that your critical data remains accessible.
Greater memory capacity	4 GB	Up to 16 GB	Additional memory can increase performance and extend the useful life of your server.

1. Processor redundancy capability requires a server board with a Baseboard Management Chip (BMC) and a server management software package such as Intel® Server Management.

2. Source: Veritest\* under contract of Intel Corporation (Aug. 2003). System configurations: System 1 configuration: Intel® Pentium® 4 processor at 3 GHz with 512 KB L2 cache, 800 MHz system bus, 2 GB DDR-400 memory, Hyper-Threading Technology enabled, Intel® SRCU42L RAID controller using RAID-0, Dell PowerVault® 220S Array – 1 per channel, Intel® S875WP1-E server board, Windows® 2000 SP3; System 2 configuration: 2x Intel® Xeon™ processors at 3.06 GHz with 1 MB L3 cache, 533 MHz system bus, 2 GB DDR-266 memory, Hyper-Threading Technology enabled, Intel® SRCU42L RAID controller using RAID-0, Dell PowerVault® 220S Array – 1 per channel, Intel® SE7501WV2 server board, Windows® 2000 SP3.

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