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- [Home](#)
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- [Industry News](#)
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- [Government News](#)
- [Financials & Personnel](#)
- [Product News](#)
- [Careers](#)
- [Events](#)
- [Video](#)
- [2001-2005 Archive](#)
- [2006 Archive](#)
- [2007 Archive](#)
- [Media Kit](#)
- Personalization**
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### AMD beats Intel in 36 of 57 power efficiency tests

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Recent tests by Neal Nelson & Associates, an independent computer performance consulting firm, have reported that in 36 of the 57 cases tested an AMD server delivered better power efficiency than a comparably configured Intel server.



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The tests were performed on servers configured with 2, 4, 6 and 8 gigabyte memory at various transaction processing load levels. The results show that in certain configurations and at certain load levels the Intel Xeon based server was 9.2 to 23.1 percent more power efficient while in other cases the AMD Opteron based server was 9.2 to 23.1 percent more power efficient. In addition, when the systems were waiting for transactions to process, the AMD server was 30.4 to 53.1 percent more power efficient.

Power consumption while the servers are idle is particularly significant since servers spend most of their time waiting for work. A November 16, 2006 report from IBM quotes a report by the Robert Frances Group which states that servers in datacenters are idle 80 to 85 percent of the time.

Other observations that can be made from the test results include: 1) Low memory configurations deliver both higher throughput and better power efficiency advantages decrease as memory size increases, 3) AMD efficiency advantages increase as memory size increases, 4) For primary type workloads, the Xeon delivers 8.0 to 14.0 percent higher peak throughput.

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For primarily disk I/O intensive workloads the Opteron delivers 11.3 to higher peak throughput.

These test results were collected by Neal Nelson's second generation Se Efficiency Benchmark. This test is a client server benchmark where worl transactions are processed against a server configured with Novell's SU Enterprise Server, the Apache2 web server software and the MySQL reli: The benchmark subjects a server to various user loads, reports the pow each load level and provides meaningful comparisons of server power u

These tests were not financed or sponsored by any company or group. I conducted these tests in response to a statement made by Intel CEO Pa July 18, 2007 analyst conference call. During that call Mr Otellini referre in power efficiency". Neal Nelson decided to use his company's benchm: determine if Intel actually had a lead power efficiency. "It appears that statement is inconsistent with the test results," observed Nelson.

Nelson's firm has a long history of data processing consulting to some c largest computer customers including the U.S. Army, U.S. Navy, the Int Service, McDonalds, WalMart and Federal Express. Nelson's benchmarki available to commercial and government users for independent comput tests.

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