

IT@Intel Brief

Intel Information Technology

Computer Manufacturing

Server Refresh

June 2009

Re-analysis confirmed a positive return on the capital investment for refreshing our servers, and we will continue to execute to our four-year refresh strategy.

— Diane Bryant
Chief Information Officer
Intel Corporation

Staying Committed To Server Refresh Reduces Cost

Intel IT is moving ahead with server refresh during 2009, after current economic conditions forced us to re-evaluate our strategy.

In consultation with Intel business groups, we had considered deferring server refresh this year due to capital spending constraints. However, our analysis shows this would increase operating and data center capacity costs by USD 19 million, as shown in Figure 1.

We therefore are continuing to execute our four-year refresh strategy during 2009, using servers based on the Intel® Xeon® processor 5500 series. Our testing shows that we can achieve a 10:1 consolidation ratio on average by replacing four-year-old servers based on single-core processors.

Profile: Value of Server Refresh

- Delaying server refresh plans until 2010 would increase our costs by USD 19 million.
- Optimizing departmental budgets can hide the value of refresh.
- Intel® Xeon® processor 5500 series-based servers offer a 10:1 consolidation ratio on average.

2009 Server Refresh Infrastructure Cost Impacts

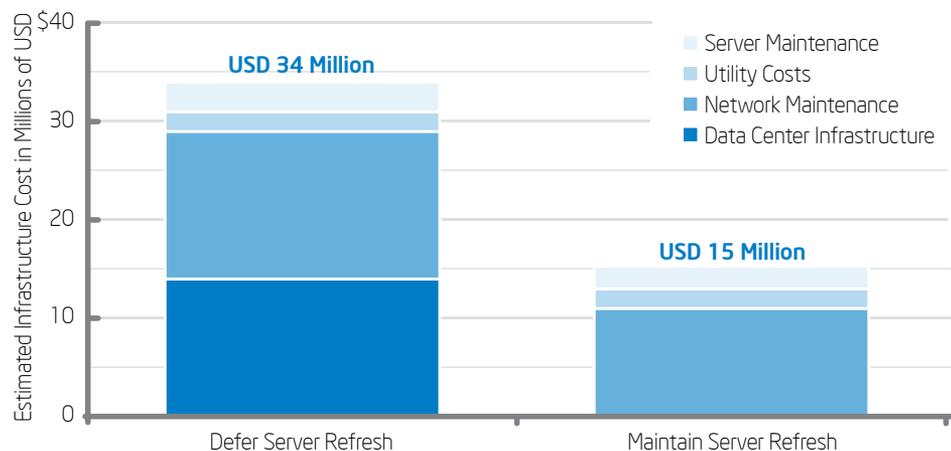


Figure 1. Deferring server refresh increases cost to Intel by USD 19 million.

Deferring our server refresh strategy in 2009 was not something we could afford.

— Jeri Karges
IT Finance Controller
Intel Corporation

Despite the fact that server refresh competes with many other programs for capital dollars, the benefits of Intel® Xeon® processor 5500 series and the ROI to the entire corporation clearly made it the right thing to do.

— Patrick Gelsinger
Senior Vice President and General Manager,
Digital Enterprise Group
Intel Corporation

Intel IT's Server Refresh Strategy

In 2008, Intel IT established a four-year server refresh cadence as a core business strategy to deliver cost efficiencies within our infrastructure. By replacing aging servers on a regularly scheduled cadence, Intel realizes operational cost savings, avoids data center construction costs, and gains space for additional servers to accommodate growth in design engineering requirements.¹ This strategy delivered USD 45 million in savings to Intel in 2008.²

Global Economic Conditions Lead to Re-evaluation

The recent economic situation caused us to question our server refresh strategy due to capital spending constraints. We decided to move ahead with server refresh after re-evaluating the total cost of ownership (TCO) impact in consultation with our business group stakeholders. We analyze the benefits and costs of server refresh using a comprehensive TCO model similar to a model we co-developed with Alinean, Inc., which can be accessed at www.intel.com/go/xeonestimator.

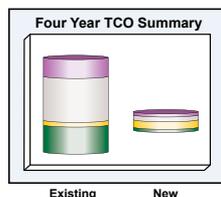
Our analysis indicates that deferring 2009 server refresh would increase operating and capital costs by an estimated USD 19 million and require us to add approximately 1.3 megawatts (MW) of new data center capacity across eight strategic locations.

Implementation Requires Enterprise-wide Cooperation

As with many IT organizations, the development and execution of our server refresh strategy requires coordination among business units, IT, corporate finance, facilities engineering, and senior management. With recent economic conditions and the need to reduce capital spending across the corporation, we found this coordination was even more important than usual. Avoiding common pitfalls, such as looking at costs from only one group's perspective, was critical to gaining buy-in from all stakeholders.

Moving Ahead with Server Refresh

We are continuing to execute our four-year refresh strategy during 2009, using servers based on the Intel Xeon processor 5500 series. Our testing shows that we can achieve a 10:1 consolidation ratio on average by replacing four-year-old servers based on single-core processors.



To estimate the value of server refresh for your organization, try out the estimator tool Intel IT co-developed with Alinean at www.intel.com/go/xeonestimator.

Author

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¹ "Accelerated Server Refresh Reduces Data Center Cost" Intel Corporation, June 2008. <http://communities.intel.com/docs/DOC-1693>

² IT@Intel Information Technology 2008 Performance Report. Intel Corporation, January 2009. www.intel.com/IT/apr.htm

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