



Would You Like to Super-size?

Choosing the Right Hardware Size for Your Company Architecture

A CIOview White Paper
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Would You Like to Super-size?

Choosing the Right Hardware Size for Your Company Architecture

Today, companies are purchasing hardware in a way that is beginning to bear a strong resemblance to super-sizing a value meal at a fast food chain. However, just as the health food trend is reducing the amount of “super-sizing” going on in the world of fast food, so too is the realization that too much of a good thing (hardware) is just plain bad for the budget.

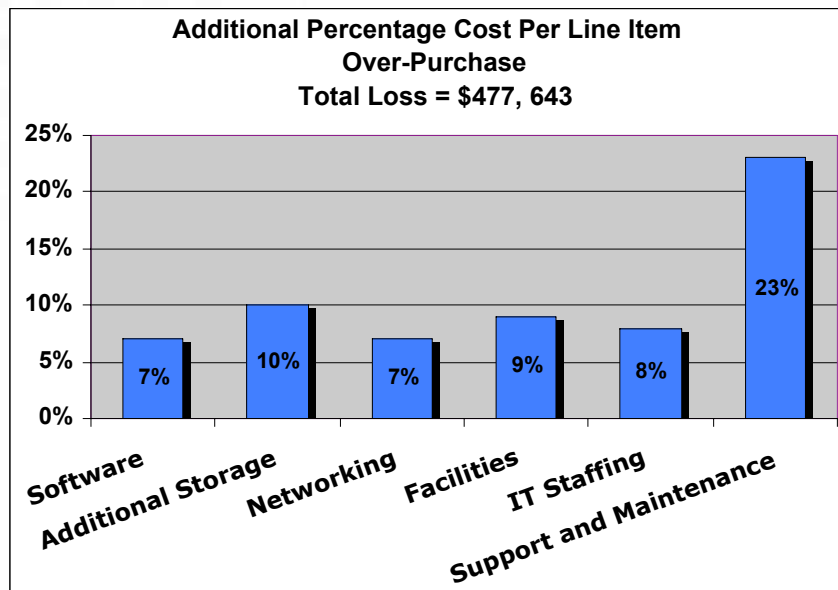
The American dining public let McDonald’s dictate the size of their shakes and French fries, and in many cases Fortune 2000 companies are making the same mistake by letting hardware vendors and/or application providers size their systems. Despite the obvious danger, this is becoming a common trend and as a result, even savvy IT organizations are routinely buying 10, 20 or even 50% more hardware than needed.

Unfortunately, an inflated hardware bill is not the only loss at stake. Since all other technology relies on the hardware to run, a hardware configuration or sizing not only dictates your hardware costs, but also determines your expenditures for software, support and maintenance, facilities, personnel staffing and downtime. This causes the costs to ripple throughout the IT budget. Worse yet, while the hardware error hurts you once, the other items continue to bite each year. The result is that many companies are building years of future costs into their IT budget simply by leaving the hardware size decision making to someone else.

When does super-sizing become too much?

Let’s look at a brief example to illustrate the financial implications of giving the responsibility of sizing your system to someone else. First we’ll take a CRM application with 1,000 users and configure it with just 10% more hardware than needed. Your hardware costs will only increase by 8%, but from the graph below, you can see that many other areas are also significantly affected. The chart illustrates the additional cost of each line item in percentage above and beyond the total amount, due to the over purchase of hardware.

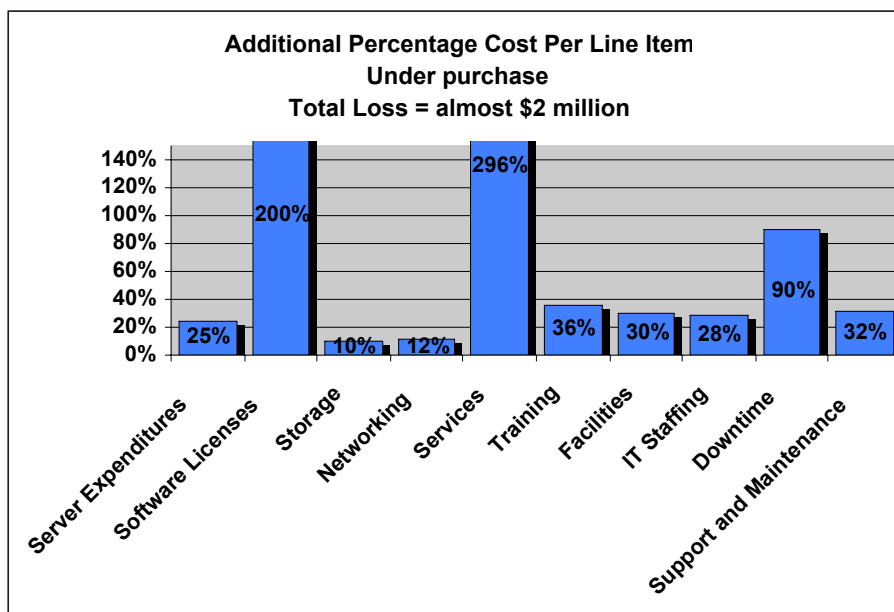
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Source: TCOnow! for ERP and CRM, CIOview Corp., 2004
1,000-user CRM application

When all is said and done, this small sizing mishap would have cost you \$477,643 over three years or added an unnecessary 7% to your ongoing IT budget.

You could argue that over-configuring a system naturally costs more but what if you chose to estimate aggressively and under-configure? The cost turns out to be even more startling, resulting in almost a \$2 million overall impact. Again, from the graph below it is clear that there is a huge impact on all other costs – a nearly 300% increase for the cost of services alone!



Source: TCOnow! for ERP and CRM, CIOview Corp., 2004
1,000-user CRM application

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All the extra costs would create a 49% increase in your three-year total cost of ownership.

So you might think that a guaranteed 7% loss due to over-configuring is preferable to the risk of a 49% loss due to under-configuring. That would be true if under-configuring was still a danger; however sizing and performance tools mean that you can be much more accurate in your estimates. Compare this to the human body – we have all evolved based on the overriding idea that starving to death is far worse than getting fat. That was certainly a sensible rule when food sources were insecure and you never knew when the next meal would come. But now that food is plentifully available in the developed world, our existing inclinations are causing obesity to be a major public health issue.

From this data it is obvious that choosing the correct hardware system is critical to the success of your budget. Certainly, configuring a Customer Relationship Management (CRM) system is a complex task and it is reasonable that there will be some costs that are better estimated than others. However, it is important to realize that for complex systems, IT staff are not just sizing one item. They actually have quite different sizing rules for the different servers, i.e., application, web servers and database. Even if the company gets most of the sizing correct and the database server is the only item sized incorrectly, the financial implications can be very large because this drives a great deal of other key assumptions. In fact a 10% mis-configuration of a database server in a CRM environment will cause a 20% impact on all of the costs it touches.

All is not lost

There are a number of very positive aspects to sizing systems at this point, namely:

- **Hardware prices have fallen significantly** - In the past two or three years, the decrease in hardware prices has been large and companies can commonly make a good financial case to migrate many of their systems onto cheaper and higher performance machines. The economics are not unlike refinancing a home with a lower mortgage rate. Savvy IT shops should already have that analysis available so that senior IT executives know the price or performance improvement level when it make sense to migrate
- **Sizing data has improved recently** – It is now available from a variety of independent sources
- **Capacity on Demand addresses the sizing situations** - Although limited at this point to the most expensive servers, Capacity on Demand will help IT shops address the most egregious sizing errors
- **Ability to add capacity** - The modular nature of new server designs allow capacity to be added without having to migrate your application and network. This reduces the risk of under-configuring your system and having to add capacity while already in production.
- **New technology allows for better management of capacity** – Windows 2003, plus new partitioning/virtualization technology in general, allow you to manage your capacity more effectively and successfully run your servers at a higher average utilization rate

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In the end...

Often IT decision makers can fall into the trap of assuming that since they have a system already in place, it should remain in place even if it is too large because the investment has already been made. However, when you look at the ongoing costs of maintaining that mistake, it is not “free” to keep those over-sized system running. When you take poorly configured systems and configure them correctly, you can decrease your costs significantly. Like refinancing a home when rates go down, right-sizing your hardware may cost some money upfront, but it will lower your ongoing costs.

Properly sizing systems is certainly not an easy task to accomplish. However, the financial implications are simply too large to ignore or to leave up to the hardware vendors to decide for you. New technology developments mean that there has never been a better opportunity to leverage your existing core expertise by using server sizing as a principal method to upgrade your technology infrastructure and at the same time reduce the cost structure of your organization. So the next time you talk to your hardware vendor or application provider, let them know that you don't intend to pay the hidden costs of “super sizing” anymore.

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About CIOview

Established in 1997, CIOview has spent more than five years gathering data from IT customers, IT consultants, and the major hardware and software companies. The result is an industry standard method to measure the business value of IT products. CIOview's TCONow! and ROInow! software combines customer data with a sophisticated system configuration engine, making it quick and easy for each customer to generate their own business case report.

CIOview has created 55 distinct products all of which use the same desktop player application and a product-specific content module. This provides customers access to a complete portfolio of business case analyzers for all of their IT purchase decisions.

Where Can You Go From Here?

- Any other questions? Contact CIOview at info@cioview.com
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