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IT Management : Network & Systems Management: Low-Cost PCs for the Enterprise

Low-Cost PCs for the Enterprise

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By Drew Robb

Ink jet printers have long since passed the $100 barrier, and PCs are headed in that direction.

What does this mean to corporate plans to buy new hardware? In a time when budgets remain tight and finding a bargain is a critical step in the purchasing process, can IT administrators and CIOs afford to look at low-cost machines.

Or is the question: Can they not afford to?

The Dell Dimension PCs now start around $500, including a 17-inch monitor, and the HP Compaq dx2000 microtower goes for $333 without a monitor. But, unlike printers, PC makers can't rely on a steady stream of revenue from cartridge sales to make up for revenues lost on selling the hardware at a lower price.

''Two things can lower PC prices -- design decisions, which are related to target market and expected usage mopels, and component pricing,'' says Steve Kleynhans, a Gartner, Inc. vice President for Client Platforms in Toronto. ''As long as you are not sacrificing management capabilities or product consistency, moving to a less expensive PC is probably fine.''

How low can prices go and still get you a valuable business resource?

As Kleynhans says, it depends on the target market and usage models, and this yields two very different answers.

Mature Market Saturation

One answer applies to developed countries. North America, Europe, Japan and certain other areas have very mature PC markets and a high user expectancy. In these regions, the primary motives for PC sales are replacing older machines with more powerful machines or gaining mobility. According to IDC, an analyst and research firm based in Framingham, Mass., the majority of U.S. PC sales are now laptops.

All of this means that cutting prices in half on desktops in developed countries won't drive a lot more market penetration.

And, of course, initial purchase price is a small factor for any hardware purchase. So, while these very low priced machines come with an attractive sticker price, support costs can quickly eat up any savings.

''Low-cost machines are limited in processing power, graphics, have limited amount of RAM and disk size, and usually have no optical writing capability,'' says Jon Peddie, president of Jon Peddie Research in Tiburon, Calif. ''They are good enough for a little Web surfing, light-weight word processing and spreadsheets and order-entry type work. However, if the user tries to do something that is beyond the means of the machine, then IT usually gets the call.''

Where users have a limited number of job functions, these kind of low-end computers could actually offer an advantage.

''You could even argue that the limited capabilities of low-cost machines would discourage users from loading resource-intensive applications on it and thereby avoid some support calls,'' Peddie explains.

Kleynhans agrees that most users in a typical enterprise setting don't need a lot of power for their main job functions, such as word processing, email, and accessing corporate applications. That means they can get by without the latest processors or largest drives. But he does advise paying attention to management functionality.

''You will want to add some management capabilities, which may slightly increase the price of the machine, but is easily paid for assuming the organization actually leverages the functionality,'' he says.

He also says it is a false economy to skimp on memory.

''Buying 256MB to save a few dollars can pretty severely impair performance and the cost to add the memory after the fact can be pretty prohibitive he says.

In selecting a low-cost PC, Peddie recommends avoiding CPUs with integrated graphics, buying less than 256MB of RAM and hard disks holding less than 20GB. But don't overspend on the CPU.

''CPU power is sold as an investment protection, pay more now and the machine will last longer,'' he says. ''It's a false argument. PC prices drop so fast and so predictably, it's cheaper to change out a PC every second or third year than it is to buy up and carry it for four or five years.''

Shooting for 100

While for a U.S. company there isn't much difference between buying a $300 or a $400 PC, that doesn't apply for the billions of people around the world who can't afford even that. Five and a half billion people, or 85 percent of the planet's population, lack Internet access.

As Microsoft CEO Steve Ballmer told a Gartner Inc. Symposium in Orlando last year, ''[I]t's going to take innovations in the products to engineer them to be lighter, smaller, cheaper, something. And not just the software. The bigger issue probably is the software-hardware combo. There needs to be the equivalent of a $100 computer -- not just a $400 dollar computer -- if this stuff is really going to go down market in some of these countries.''
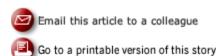
Companies are taking several different approaches to addressing that problem. They include:

- Novatium Solutions Pvt. Ltd. of Chennai, India, is making the Nova NetPC 1000 Priced at under $100 (monitor not included) this thin client device connects to Windows, Unix and Linux servers. It uses the Linux operating system and Mozilla browser. It comes with keyboard, mouse and Webcam as standard equipment. Connection options include TCP/IP, Bluetooth, 802.11b, USB. 10/100 Ethernet and DSL.
- Advanced Micro Devices, Inc. of Sunnyvale, Calif., is making the Personal Internet Communicator -- AMD began selling this three-pound device last year through ISPs in the Caribbean and India. It uses the AMD Geode GX processor, integrated DDR memory, has a 10GB hard drive, four USB ports and an internal 56K modem. The system runs on the Windows CE operating system and comes with word processor, spreadsheet, email, messaging, browser and other applications preinstalled. Prices are set by the ISP, with Cable and Wireless selling it for $238 with a 15-inch monitor or $185 without.
- Encore Software Ltd. of Bangalore, India, has the Mobilis -- Encore has created three versions of this computer, at a price from about $230 to $450. There are two mobile versions, one with a built-in keyboard, and both with 7-inch LCD touch screens for stylus input. One of them is wireless. There also is a desktop model called SofComp. All models run on Linux and have open source word processing, spreadsheet, scheduling, email and other applications.
- $100 Laptop Project -- This project, started by MIT professor Nicholas Negroponte, has the goal of manufacturing hundreds of millions of Wi-Fi enabled Linux laptops for sale in bulk to education departments for distribution to students. He is working with the Brazilian and Chinese governments. AMD, Brightstar, Google, News Corp, and Red Hat are supporting the project. The specifications call for a 500MHz processor, 1GB of storage and a 1-megapixel display, with software scaled down to run on the system. Production is scheduled to begin in 2006.

When to Go Low

So, for corporate installations in developed countries, with high hourly rates for tech workers, a few support calls cost more than the price of better hardware. Don't forget that doesn't take into account the productivity loss.

For a multi-national firm with employees in countries with much lower wages, however, the lower on-site support costs may make it worthwhile to buy these lower-cost machines. It also means these employees may be getting home machines, and will want to get access to online employee self-help or e-learning applications.

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