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Thin-Client Computing Offers Schools A High-Tech, Low Maintenance Solution

Schools that want cheaper machines, higher computing power and less maintenance should consider the thin-client network computing model, according to technology experts.

“With network computing, you can take the complexity out of the classroom,” said Kim Jones, vice president of Worldwide Education Markets at Sun Microsystems. “Businesses are embracing this model all over the world.”

The thin-client model is reminiscent of dummy-terminal mainframe computing. With a thin-client network, all the computing is done on a server, and there is no need for a hard drive or any processing capability on a desktop.

While many schools have a network, they do not have a completely networked environment, one where all the processing capacity and software reside on a remote server.

Maintaining these semi-networked (or client-server) systems requires a tremendous amount of technical support, Jones said.

“The management of PCs is a nightmare,” she told *ETN*. “The issue with the old PC model was those PCs had to be upgraded because the processing is done on the PC. In schools, that model just isn’t possible. And it was really quite expensive for businesses.”

With everything stored on the server, teachers and students have more flexibility as to where they work, said Computer and Communications Industry Association (CCIA) Vice President Jason Mahler.

“If you have one individual with their own PC, they can only use that PC,” Mahler told *ETN*. “If you have a device, they can go to any place on the network and call up [their work]. They can move from classroom to classroom.”

When Life Gives You a Lemon Grove...

So, some schools have decided to move to a thin-client model. California’s Lemon Grove School District is one of them. Through its Project Lemon Link, the district instituted a thin-client system, and is saving money on equipment and technical support.

“One of the things we realized is we had to stop buying these full-blown multimedia computers,” said Darryl LaGace, director of information systems for Project Lemon Link. “We have an appliance now. It has no hard drive. All the processing is done on a farm back at the data center. From an [information technology] IT perspective, you only have to load new software on the farm, not on every machine.”

LaGace and others from the project spoke recently at the “Leveraging Technology” conference sponsored by the Conference Board.

He told *ETN* when one takes into account total cost of ownership, these thin-client devices are significantly cheaper than traditional PCs.

“We can buy and support three of these appliances to every one of these computers,” LaGace said. “It’s not just the upfront cost, but what does it cost to maintain and support it.”

Lemon Grove uses a two terabyte, which is the equivalent of 2 million megabytes (MB), server.

(Continued)



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Thin-Client Computing *(Cont.)*

Each student is allotted 50 MB of space, while teachers get 250 MB.

Lemon Grove still has some “legacy” computers, with a typical classroom consisting of 4 traditional PCs and 12 thin clients. The district has a staff of five technicians to maintain its system.

“Four of those guys support the legacy machines, and one manages the server farm [for the thin clients],” LaGace said.

Maintenance advantages of thin clients include not having to deal with a PC after a student has accidentally erased the hard drive and not having to deal with a PC when a student has purposefully deleted most of the required software to install the latest version of the game Doom.

While one of the advantages to thin-client computing is that software resides on the server, it also requires schools to interact more closely with the software providers.

“One of the reasons they let us do this is because we don’t allow anyone to copy stuff,” LaGace said. “There is no disk drive or floppy [on the thin client].”

Don’t Try This at Home

In addition to easy maintenance, thin-client devices are sturdy and ready for the abuse school-children can heap on them, said Jeff McNaught, vice president of marketing for thin-client manufacturer WYSE Technology.

“Take your personal computer, gently drop it three feet onto the linoleum floor and tell me what happens,” McNaught joked. “The thin client is designed to do exactly that. There are no moving parts; there is nothing to break.”

In addition to their durability, McNaught said thin clients “use dramatically less power.” (*See related story, p. 102.*)

In California, where some schools face rolling blackouts due to the power crisis, thin clients have other energy-related advantages.

“If the thin clients get turned off during a rolling blackout, the servers, which are battery backed, are not,” McNaught said. “So when the power comes back on, everything is still there when you turn the thin client back on.”

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