

Thin client architecture

'Dumb' terminals are easier to manage in the business world. **Interviewed by Chelan David**

In the technology world, a thin client doesn't allude to a client who's been sweating on the treadmill. Rather, it refers to a system where the computer — the client — is configured with only the essential equipment.

Thin client systems are attracting the attention of businesses for several reasons. First, they offer a way to protect confidential data. Also, there is no need to fret about individual PCs passing viruses to other company PCs.

"The new-found interest in thin clients is because of the security and lowered total cost of ownership," says Hormazd Dalal, president of Castellan Inc.

Smart Business spoke with Dalal about why a company would want to pursue thin client architecture, what types of businesses can benefit most and how he sees thin clients being used in the future.



Hormazd Dalal
President
Castellan Inc.

What are thin clients, and how do they differ from PCs?

A thin client is a device that typically does no processing and accesses a server where all of the applications and data reside. There are no programs or data on the thin client. It provides access to a virtual desktop on a centrally located server that allows users to function. A PC has its own hard drive and a processor fast enough for it to run applications locally, which requires the software to be managed.

How does thin client architecture compare price wise to client server architecture?

Thin clients range from \$100 for a refurbished machine to \$300 for a new one that can run a RDP (remote desktop protocol) or Citrix (ICA) client. This is less than half the cost of a Windows PC. However, initial investment in the thin client architecture can be considerable. Load-balanced servers running Citrix can cost from \$50,000 to \$100,000 if configured for mission-critical computing. A single Microsoft terminal server capable of handling 50 concurrent connections could cost as much as \$25,000 but would render the entire client base inoperable if it failed.

Why would a company want to pursue thin client architecture?

The primary reason would be for management purposes. If the cost of acquiring the hardware is the reason for pursuing this type of architecture, then it would be the wrong reason. You want to go with thin client architecture because of manageability issues — there is no management required on thin clients. You don't have to worry about virus protection, you don't have to worry about data on the thin client, and you don't have to worry about a broken application on the thin client. It all resides on a backend server.

What security and maintenance advantages do thin clients offer?

You never have to reach out to the thin client to do any security or maintenance issues. Typically, you do all this on the server. Thin clients are not vulnerable because there is no activity on them.

What types of businesses are most likely to use thin clients?

Large organizations and any organization with multiple sites. A large organization

has management issues that an organization with just 20 or 30 users does not have. When there are multiple sites, you can have one centrally managed location where hundreds or thousands of thin clients can access their desktops from all over the world. This allows for everything to be managed on one server, or for a cluster of servers to be load-balanced.

Why is there a new interest in the old concept of thin clients?

It's an old concept because, in the days of the mainframe 20 or 30 years ago, that's how most people computed. Large organizations had a dumb terminal that would access a session on the mainframe. Then as PCs became easier to use with graphical interfaces, there was a logical shift toward client server architecture. Technology was developed to allow remote PC management, so that users could function with the latest graphically oriented software.

Today, with Citrix and Microsoft's terminal servers, a thin client can enjoy the graphical user interface (GUI) that was not available with the dumb terminal of the past, allowing the management and security advantages of centralized computing.

What do you see in the future?

I see the future of thin client architecture taking off. We deploy terminal services to many of our customers. However, they don't necessarily use a thin client. They're using a PC, but that PC isn't required to do anything. The drawback of a thin client is that it won't do anything on its own as a standalone machine, whereas if you buy a PC it can be used as a thin client and also as a standalone device.

The architecture and concept of thin clients are taking off, but I don't think the actual use of a thin client machine will become mainstream for awhile. This is because they are not cheaper. People will still pursue the architecture, but they will use the regular PC as the client.

HORMAZD DALAL is president of Castellan Inc. Reach him at (818) 789-0088, ext. 202 or hormazd@castellan.net.

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