

Server Based Computing the Thin Client Way

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SERVER BASED COMPUTING THE THIN CLIENT WAY

Thin client computing refers to information processing through a network-based approach that encompasses both hardware and software. Thin client devices are alternatives to PCs that connect users to a server where applications and data are centrally stored and processed. The advantage of thin client technology is that it eliminates the need for PCs that can run applications locally. Instead, individual members of the network view applications via thin client terminals, which are essentially high-end display screens with no local drives. The technology provides a variety of cost, management and security advantages to organizations that use it.

A thin client server is optimized to allow central deployment, management, support, and execution of applications and upgrades from a single location. A multi-user operating system on the server allows an application's interface to be presented throughout the network to individual remote locations. Each remote device can instantly access whatever business-critical applications authorized users require. Thin client technology works effortlessly with current technology, and it will continue to integrate easily with future Windows-based applications as well. Any number of users can access applications from the central processor simultaneously, and each thin client can run the same or different applications in separate, protected sessions. Sessions can run on a single server, or more than one server can be used. Typically, between 30 and 60 thin clients are hosted by a single server.

Centralized thin client computing is easier on technical staff because fewer people can deploy new software more quickly. Once an application is tested and installed on a central server, anyone who is authorized to use that application can access it instantly. Successful deployment does not depend on access to individual PCs. In this way, thin client technology reduces the cost of support services since a support team is only required at a central location. By eliminating the need for support personnel at remote locations, not only can support staff size be reduced, but the efforts of support personnel can also be more focused. The result is likely to be

better quality of support in general.

Because the central server handles the work of running programs and storing data, many of the features of PCs are not needed in a thin client environment. This means that less client resources are needed. Also, thin clients do not need local drives since application and data storage reside on a centralized server. Thin clients are able to access almost any application from different operating environments. Thin client software allows local printing as well as support of audio and serial devices. It also provides the tools needed for remote management of both thin clients and PCs throughout the network. Thin client terminals are also more reliable than PCs, in most cases functioning twice as long.

For many organizations, the most attractive benefit of centralized computing is that it is more cost effective than managing a network of PCs. Thin clients cost about half as much to maintain as PCs, typically running a tab of about \$4000 over four years for hardware, software, and maintenance. At a third of the cost per unit, thin clients provide simpler and faster access to information. Installation and upgrades are easier as well. The lower cost is due to the fact that only the server needs to be upgraded with Operating System and applications, while a network of PCs requires upgrades to hardware and software for each individual unit. With upgrades typically happening every year, this is a substantial saving of time and money. Upgrades can usually be accomplished in a few hours after the business day has ended or on weekends. Also, once the server is upgraded, all thin clients have immediate access to the same operating system or applications. With a network of PCs, individual users are often operating with different versions of a single program.

Another benefit of thin clients is that bandwidth usage is significantly reduced because an application's logic is separated from the user interface. Likewise, less power is needed for thin client devices. Licensing is also simplified because applications are only installed on the central server, eliminating the need to maintain

a license on each individual PC. Security is also better with thin client computing since sensitive corporate data storage and backups are performed at the server. With no CD-ROMs or floppy drives, there is little risk of unauthorized copying or transfer of data, and the possibility of a virus being introduced anywhere in the network is virtually eliminated as well.

Thin Client computing evolved from the concept of the network computer that was introduced a decade ago to replace expensive and complex desktop PCs with a simple terminal that could run a Web browser and download applications from network servers. The idea behind the development of network computing was to provide an alternative to Microsoft, but few IT managers were comfortable taking the risk of abandoning familiar Microsoft products for the new technology. Since 2000, however, Windows software has included built in support for thin clients, which means that users can now reap the benefits of network computing without having to abandon Windows. Also, the shift away from central computing that occurred in 1980s due to the idea that servers were unreliable is no longer an issue for thin clients. Modern servers are now so reliable they that they can all but be taken for granted. Thin client computing is able to capitalize on this, sparking an increasing demand for the server based computing technology.

The rise of thin clients is also due in part to the rise of hosted software and browser based access to applications, as well as the growth of networks and call centers. While it is still mostly used in call centers and other such places, even home offices may soon adopt thin client technology. Industry analysts believe that thin client users will increase as part of a larger trend that is being driven by the growth of broadband and WiFi networks that feed a range of consumer devices like PDAs and laptops.

Along with the technical advantages and ease of use provided by thin clients, tighter budgets are making server based computing a logical alternative as well.

While at first glance, the cost of initial hardware and software configuration for thin clients does not appear to provide cost savings, the important calculation is the total cost of ownership (TCO) over the lifecycle of the system. Over time, TCO is significantly less for thin clients than for their PCs.

One reason for this is the durability of thin clients. With small, sealed cases that contain no moving parts, downtime is minimal even when repairs are needed or when thin client terminals need to be replaced. Thin client hardware can be purchased for half of what it would cost to configure a full desktop PC, and software costs are essentially fixed. Also, IT support ratios are reduced, usually to about one support person per 500 units, a significant reduction from the typical one to 100 ratio needed to support PC networks. The same reduction in staff needed to support the network applies to installation and upgrading as well, making thin clients much easier to manage and finance overall.

About AT Labs, Inc.

Founded in the heart of Silicon Valley, AT Labs Inc. (AT Labs) is the fastest growing provider of simplified mobile wireless networks using Thin Client technology. AT Labs focuses on developing wireless Thin Client products to provide low-cost and secured access to all intranet and internet applications.

What is our mission?

Our goal is to provide you with the best mobile wireless computing solutions, the most advanced technology, and superior technical support. We have the expertise to expand your success—both now and in the future.

What do we make?

Wireless Thin Client computing is the next evolution in enterprise productivity for both general purpose and application-specific tasks. With everything on a central server, all users—wherever they may be in the field—have the same access to the same applications at the same time. If there is a problem with any individual unit, its data is safe on the server.

Wireless Thin Client appliances from AT Labs provide you with longer battery life, which saves you money in power consumption and conserves your storage space. Ultra-slim, ultra-light, and ultra-powerful—this wireless appliance replaces old PC problems with 21st-century expertise and power.

Desktop Thin Clients feature everything you've become accustomed to with regular PC's—minus the hardware and application headaches. Windows, Web, Java, and mainframe applications run just like on a regular PC. Updating and management are controlled from a single point, making all changes universal and immediate. Your entire network functions as a solid unit.

Easy to setup, each NetTerminal™ is preconfigured with embedded Windows or Linux operating systems. Plug-n-Play connectivity gets you up and running fast. Standard NetAdmin™ remote management software provides you with total control of your network.

One hundred thousand Thin Client units have already been installed worldwide by our experienced team of business professionals, network system integrators, and value-added resellers. Government, education, banking, manufacturing, retail point-of-sale, and healthcare are just some of the markets currently benefiting from Thin Client technology.