

Commentary

Is Thin In?

Because of fears of a worldwide economic decline in 2001, many organizations will avoid PC upgrades by deploying thin-client applications.

In the face of layoffs and shrinking budgets, thin may be in. While PC growth is stagnant, thin-client software growth projections for 2001 are around 30 percent to 40 percent. Granted, much of this growth is based on pent-up demand for Windows 2000 Terminal Services, but cost-saving pressures may push thin-client growth even higher. While thin-client hardware growth is also projected to be in the 30 percent to 40 percent range in 2001, about 85 percent of thin clients are PCs configured as thin clients, or with access to thin-client and "fat-client" applications. Many enterprises are wondering why they should upgrade their PCs again for Windows 2000. Avoiding the upgrades and turning their old PCs into thin clients seems like an obvious alternative, especially in a stagnant economy.

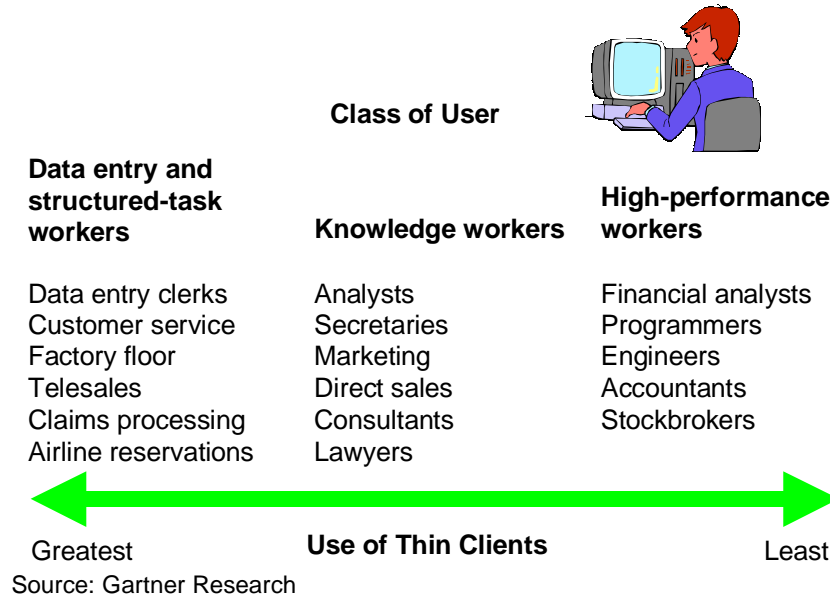
Thin-client deployment is not a panacea, but it can be an effective way of reducing total cost of ownership (TCO), provided it is done judiciously and with best practices. We do not recommend deploying thin clients as an across-the-board desktop replacement, but they can be deployed successfully as a desktop replacement in targeted environments, or for targeted applications in the enterprise.

Gartner estimates that 90 percent of enterprises that have deployed or plan to deploy thin-client applications have done (or will do) so in vertical-application environments, such as customer service (call centers, airline reservations, package tracking, healthcare centers and retail operations). These are far more than "green screen" data entry production environments, and they often include light use of Microsoft Office, e-mail and Internet access, as well as client/server business applications. The key characteristic of these environments is that computer use is not related to content creation.

Typically, thin clients are being deployed for data entry and structured-task users, not for knowledge workers or high-performance users (see Figure 1). These are the easiest areas in which to deploy thin clients. The technology works well in this type of environment, and the enterprise meets less end-user resistance because the users are not "wedded" to PCs. Once thin-client applications have been successfully deployed for vertical applications, enterprises tend to deploy them elsewhere for targeted users in general horizontal office environments.

Gartner

Figure 1
User Profiles and Thin Clients



Through 2005, more than 80 percent of thin-client desktops will be deployed selectively in specific end-user environments characterized by task-oriented computer use, such as customer service centers (0.8 probability).

However, the biggest opportunity for thin clients is among users who consume and distribute information (e.g., knowledge workers). The application and performance needs of 80 percent of knowledge workers are met by thin-client desktops, but most of these users will resist thin clients because of their negative perception of the technology (e.g., the fear that they will lose their freedom, and that they are going back to a “dumb” terminal). Enterprises deploying thin clients to these users should take proactive measures and respond to their concerns early in the pilot phase. Thin-client deployment is not appropriate for high-performance users (those whose jobs require heavy-duty use of local computing power to create or manipulate information) or for those users who need to work offline.

Through 2005, fewer than 2 percent of midsize and large enterprises will switch all their desktop applications to thin-client technology, but at least 60 percent of enterprises will deploy thin clients in selected environments for targeted applications (0.8 probability).

There are several types of thin-client environments and deployment, including Java and browser-based application environments, but thin clients are heavily dominated today by Windows Terminal Servers. From a technology standpoint, Windows Terminal Servers are appropriate for many desktop users for moderate office use, including word processing, spreadsheets, presentations, e-mail, Internet access and client/server business applications. However, cultural resistance to thin-client technology among traditional PC users is the major inhibitor to widespread thin-client deployment. They fear that they will lose some freedom and flexibility by moving to thin clients.

Most enterprises deploy thin clients for TCO benefits (arising from reduced staffing for software maintenance and deployment). However, deploying thin-client applications does not guarantee reduced TCO. The TCO benefit of thin clients compared with fat-client PCs diminishes when effective software management tools are used with fat clients. Gartner analysis shows that the annual TCO benefit for Windows terminals compared with unmanaged Windows 2000-based PCs is 32 percent, but the benefit is only 1 percent compared with well-managed Windows 2000 PCs. (The analysis was done using

Gartner's Ti2 software tool for 2,500 desktops with 250 thin-client applications deployed, 10 percent of which were optimized for thin-client deployment; the model includes the thin-client migration costs.)

Successful deployment of thin clients — resulting in lowered TCO and improved productivity — depends on targeting the appropriate applications, users and environments with the required server and network infrastructure. Enterprises should do their own TCO and return on investment (ROI) analysis.

Benefits of Thin Clients

Some of the benefits of thin-client deployment include:

- Reduced staffing (especially the help desk)
- Reduced client-side hardware and reduced software maintenance and version control
- Rapid application deployment
- Greater client reliability
- Roaming access (including remote access over dial-up connections and WANs, as well as access to the applications from the Internet)

Limitations of Thin Clients

Some of the limitations include:

- Shift in staffing to the server and network
- Server cost and scalability
- Network infrastructure needed to support thin clients
- Potential performance issues
- Heavy-duty office use
- Offline work
- Multimedia (streaming video and imaging)
- Investments needed in training end users and in developing the skills of the technical staff
- Resistance by traditional PC users to thin-client technology

Bottom Line: Enterprises faced with cost-saving measures can avoid PC upgrades by deploying thin-client applications. Thin-client desktop computing is not a solution for all users, but it makes sense for targeted users in the majority of enterprises.