Why utilize HP Thin Clients?

More and more organizations are recognizing the benefits of thin client server computing (TCSC). Thin clients deliver a desktop experience in work environments where end users have a well-defined set of tasks, such as general office applications in medical, financial, educational, government, manufacturing, distribution, or call center environments. Above all, they provide your organization with:

- Fast, convenient access to applications throughout the enterprise
- Rapid, centralized deployment of new applications
- Simplified client architecture and reduced hardware maintenance costs
- Server utilization optimized by load-balancing features that automatically route user sessions to the server with the lightest load
- Improved, simplified manageability, reducing the workload for IT staff
- Enhanced security and backup

HP offers enterprise-ready thin clients engineered with personal computer industry standards to deliver simplification your environment and IT management. These products are designed for corporate departments focused on significantly reducing total cost of ownership (TCO). Thin clients and servers from HP backed by software from Microsoft and Citrix deliver an ideal TCSC solution.

Why HP Thin Clients?

- A complete thin-client-server-computing solution
- Security of data and hardware dramatically simplified
- Delivers lowest total cost of ownership
- Breadth of product line
- Competitively priced
- Stable, reliable and secure
- Ease of management and support
- Worldwide professional services
  - plan, design, implement, and manage the integration of HP and third-party products and services

Key features of thin client computing

A thin client is a computing device without a hard drive, which displays data and applications from remotely located servers or blade PCs. A basic thin client consists of a processor, flash memory for storing the embedded operating system, local RAM, a network adapter and standard input/output for the display and other select peripherals. HP thin clients have no moving parts, offering higher reliability than a PC, lower ownership costs and extended product life. These small, robust devices consume significantly less energy than a desktop PC.
There are two major models of thin client computing: Server-based computing and Consolidated Client Infrastructure.

Server-based computing

In server-based computing, the thin client only runs the user interface and transmits the mouse clicks and keyboard data to a server. User applications run on the server, and the video data is sent back to the client for display. In this computing model, thin clients are typically utilized as part of a Citrix Metaframe, Presentation Server, or Microsoft Terminal Services deployment.

Corporations often choose server-based computing to centralize application deployment, database information, or to deploy a corporate portal. Thin clients can also be used to replace older devices commonly referred to as “green screen” terminals, or simply to access the Internet via a browser. Offering the look and feel of a regular Windows® PC, thin clients will allow your organization to centralize computing power, storage, applications and data on servers running in a data center.

Consolidated Client Infrastructure

Thin clients are also an important component of a Consolidated Client Infrastructure (CCI) solution, an entirely new computing model being introduced by HP to many of its best customers (not available in all regions).

CCI solutions centralize desktop computing and storage resources into easily managed, highly secure data centers, while providing end users the convenience and familiarity of a traditional desktop environment. It provides a dynamic workplace solution that may dramatically lower desktop total cost of ownership (TCO) while raising levels of security, service quality, and ease of management. CCI is an example of HP virtualization solutions – solutions that enable an adaptive enterprise where business and IT are synchronized to capitalize on change.

Utilizing combined product and services offerings from HP, CCI is a three-tiered architecture that consists of:

- An access tier using thin clients;
- A compute tier with racks of blade PCs inside a data center;
- A resource tier made up of a storage pool, network printers, application servers, and other networked resources, also inside the data center.

With CCI, end users access their applications and data in a customized environment – just as they do today. The difference is that users work on a thin client and establish a one-to-one connection with dynamically allocated blade PCs and centralized storage. Individual desktop images and data are stored and controlled in an IT infrastructure in the data center.

Thin client components

Thin clients are based on the Microsoft Windows Embedded family of operating systems, which includes Microsoft Windows CE.NET and Microsoft Windows XP Embedded, and the Linux operating system. These devices are key components in server-based computing solutions where line-of-business (LOB) applications are deployed through the Terminal Services functionality of the Microsoft Windows 2003 Server family, through Citrix Metaframe or Citrix Presentation Server, through Web-based services, or through blade PCs.

Thin clients are not recommended for some applications, such as those involving workers who need powerful local processing and significant storage. These workers typically include engineers, graphic artists, multimedia developers, and designers.
Ideal environments for thin client computing

Thin clients can meet many business needs including

• Businesses where end users have a well-defined set of tasks, such as general office applications in medical, financial, educational, government, manufacturing, distribution, or call center environments. Users can run a wide range of office software such as Microsoft Word, Excel and PowerPoint or unique applications required by your line of business.

• Businesses that require a highly available network of computers connected to a centralized server running mission-critical applications can greatly benefit from the reliability of thin clients. Hospitals, insurance agencies, airline reservation centers, and hotels are typical businesses that fall into this category.

• Businesses with departments that carry out highly standardized computing tasks, such as sales or service call centers, data entry departments, or technical support desks, may realize substantial cost savings by deploying thin clients rather than desktop PCs. The computing power and flexibility of a desktop PC is often unnecessary and potentially undesirable in this environment—users may load local applications, or reconfigure or otherwise tamper with the integrity of a desktop PC.

• Educational institutions and similar organizations typically need more computing resources on an ever-shrinking budget. Universities and schools with under-resourced IT departments must keep hundreds or thousands of computers up and running with the latest software, despite supporting multiple users per machine. Thin clients can meet these challenges in two ways: with their solid construction and lack of moving parts, thin clients are designed to withstand heavy usage; and, because applications and storage usually reside on the server, the latest versions are always available to every user.

• Businesses using dumb terminals can upgrade to thin clients to offer a more robust platform that can handle e-mail programs (such as Microsoft Outlook 2003) and common business applications (such as Microsoft Word or Excel). The HP Compaq t5000 Thin Client series offers optional expansion that includes hard drive, diskette drive, or CD-ROM capabilities with an external MultiBay. Terminal emulation gives thin clients access to legacy database information.

• IT managers at Fortune 1000 businesses which have aggressive cost-cutting agendas are challenged to do more with less on a daily basis. Thin clients typically promote cost savings by reducing the amount of IT support staff needed—they allow network administrators to update software remotely rather than deploy it repeatedly at the desktop. In addition, new thin clients are easy to deploy—often in less than 15 minutes.

Why choose HP thin clients?

All the features of HP thin clients combine to make them an ideal enterprise computing solution. A thin client environment provides centralized computing and an easily managed network. Designed to simplify IT management, HP thin clients are backed by the HP reputation for quality, reliability and compatibility.