

How CLI Thin Clients Can Reduce Total Cost of Ownership Vs. PCs Or Other Devices

Use of CLI thin client devices instead of PCs or other devices can dramatically reduce the Total Cost of Ownership of any IT environment. To fully understand this benefit, it is important to understand what server-based computing is, and what CLI thin clients are.

Server-Based Computing

The cornerstone concept behind CLI thin clients is server-based computing, which is sometimes referred to as server-centric, centralized, application-server, or client-server computing. In server-based computing, all applications are deployed, supported, and executed at the server, not at the user desktop. All data is stored on the server. Only keystrokes, mouse clicks, and the screen images travel across the network (or the Internet). All applications are displayed on the desktop device. This desktop device can be a text terminal, a Mac, a PC, terminal emulation software, or a CLI thin client.

CLI Thin Clients

CLI thin clients are simple devices that are used for information display. CLI thin clients do not “run” applications, but can display any application containing graphics or text information. Their use brings many benefits, but the single largest benefit is reducing Total Cost of Ownership.

Total Cost of Ownership

Total Cost of Ownership, or TCO, is a concept used to better understand the cost drivers of deployment of a particular IT model. Sometimes only the up-front procurement costs are considered when comparing IT models. But TCO takes into account not only the procurement costs, but also the back-end and ongoing administrative, management and usage costs of IT models over their useful lifetimes. The use of CLI thin clients can greatly impact many drivers of TCO.

CLI Thin Client Devices Have A Longer Useful Life

CLI thin clients have no local hard disk, floppy, or CD storage, and no fan or other moving parts, the parts that typically break down in PCs. Because they do not contain these parts, CLI thin clients have nearly 10 times higher reliability than PCs, greatly reducing (and even eliminating) downtime. In addition, in order to display applications running on the server, CLI thin clients use either a type of display protocol, terminal emulation, or web browser. Applications can be upgraded or added to the server constantly, but the display protocols within the thin client do not necessarily need to change. And if they ever do need to change, CLI thin clients include management software, which systems administrators can simply use to remotely upgrade the thin client software, without needing to visit every desktop. In addition, the display protocols used require little local processing power in the thin client, so the thin client hardware is not obsolete immediately after deployment like PCs can be. All told, CLI thin clients have a useful life estimated at 7-10 years, as compared to 2-3 years for PCs, deferring device replacement costs considerably.

CLI Thin Client Devices Facilitate Rapid Software and Hardware Deployment / Delivery

Since CLI thin clients are compatible with industry-standard PC keyboards, mice and monitors, and come complete with multiple communication ports, installation is simple, fast and easy, typically taking less than five minutes. In addition, since all applications are deployed, supported, and executed at the server, and not on the thin client, to maintain version / release level consistency among users systems administrators only have to load upgrades or new software once onto the central server, instead of multiple times onto various PCs. Plus, memory and storage upgrades also get focused on the server. All of these minimize business interruptions, and save tremendous amounts of time.

CLI Thin Client Devices Reduce Security Risks

Because CLI thin clients have no local hard disk, floppy, or CD storage, they are nearly virus resistant, and reduce the number of potential virus entry points into an organization, keeping valuable company data secure from corruption. The lack of local storage also keeps company data private by preventing inappropriate removal. And because applications execute off the server and not locally, CLI thin clients themselves are not prime targets for theft as are PCs, reducing insurance and device replacement costs.

CLI Thin Client Devices Reduce User (Re)training Requirements

CLI thin clients use industry-standard PC keyboards and mice, and make use of existing applications. End users who have already used PCs or terminals require little (re)training in order to acquire the knowledge and experience to safely and productively use CLI thin clients. This makes them self-sufficient in a shorter amount of time, saving money and time.

CLI Thin Client Devices Consume Less Energy

Because they are simpler, have fewer components, and no moving parts, CLI thin clients typically consume one-tenth the energy that PCs or other desktop devices consume. This lower power consumption not only saves money, it also contributes to increased hardware reliability and is environmentally friendly.

CLI Thin Client Devices Are More Durable In Harsh Environments

In environments where dust, dirt, and other contaminants are prevalent, fans in PCs can suck in such contaminants, causing hardware components to overheat, or moving parts to stick or seize, leading to device failure. CLI thin clients have no fans or other moving parts. And some CLI thin clients also come complete with impact-resistant metal enclosures. This all saves on repair and replacement costs.

CLI Thin Client Devices Reduce Help Desk Demands

Being simple devices, CLI thin clients require less maintenance than PCs, since there is far less that can possibly go wrong. If issues do arise, CLI thin clients are faster to troubleshoot. Using shadowing, systems administrators can remotely "view" any CLI thin client for faster configuration, problem diagnosis, and resolution. And systems administrators can use the included management software to remotely upgrade the thin client, without needing to visit every desktop.

CLI Thin Client Devices Provide Investment Protection

CLI thin clients can protect investment in existing desktop hardware. They support "legacy" connectivity, coming complete with PS/2, parallel, serial, and VGA ports, allowing the use of existing peripherals such as standard PC keyboards, mice, monitors, and printers. This reduces or eliminates the need to scrap or write off existing, functioning peripherals and replace them with new peripherals.

It All Adds Up To Savings

Many industry analysts have performed studies on TCO, and a number of articles have been published on the subject. By using CLI thin clients, TCO savings estimates vary, from as low as 10% to as high as 75% (or more) over the useful life vs. the use of PCs or other desktop devices. But actual TCO savings is something that will vary from installation to installation.

This paper outlines only a few of the drivers of TCO. There are many other drivers of TCO where the use of CLI thin clients can save time and money, including, but not limited to:

- Hardware and software acquisition or capital expenditures
- Depreciation
- Legacy application and data access, such as on mainframes
- Software licensing
- IT staffing
- Network administration and management
- Downtime (lost revenue)
- Productivity and responsiveness
- Informal end-user / peer support
- Data and application backup and restoration
- Scalability
- Complexity and efficiency
- Customer satisfaction
- Employee satisfaction
- Asset management
- Policy, procedure, and standards development and enforcement
- Documentation and planning
- User location change
- User wants and needs
- Technology transition and migration
- Cost of capital and interest rates
- Preventive maintenance
- Cultural / behavioral obstacles
- Employee turnover

In order to make any IT decision with confidence, each TCO driver should be examined thoroughly. In many cases the financial impacts of implementing an IT model are not obvious. Costs are sometimes budgeted, but more often costs are unbudgeted, immeasurable, or hidden.

TCO should be among the most important business considerations in deciding on a particular IT model. It is not only substantial from a perspective of economics, but using a TCO analysis can also help to identify many infrastructure issues of importance as well. CLI encourages those who are investigating the use of CLI thin clients to consider all the drivers in their chosen IT models that affect TCO, and just how CLI thin clients can help.

For more information, visit the Computer Lab International web site at www.computerlab.com, or send email to info@computerlab.com, or call 1.800.727.5250 in the US, 1.714.572.8000 elsewhere.

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