

Realize a 45% Reduction in TCO While Providing Complete End-User Autonomy

The Classic Struggle of Reducing PC TCO and Maintaining End-User Productivity

Currently, the total cost of ownership (TCO) on an annual basis is \$5,867 per unmanaged desktop and \$9,224 per unmanaged notebook. For organizations large and small, there is a constant tug of war between IT management wanting to reduce PC TCO through locking-down computers and the effect on end-user productivity. There have been several studies conducted by leading analyst firms that agree the best way to reduce PC TCO is to lock-down the machine. This limits the changes that can be made to the base operating system and prevents the installation of unauthorized software to the computer as well as block access of unwanted applications. A report by Gartner says, "Locking down users could deliver an overall TCO reduction of 45% more than unmanaged notebooks."¹

However, the challenge with locking-down a PC is the limitations it imposes on the end-user. In conventional desktop computing environments, a locked-down computer severely limits the end-users ability to use a software application's entire set of features, including customization, add-ons, applying updates and intercommunication with other applications. This results in limited functionality and ultimately impacts the end-user's productivity. In their report on the TCO of PCs, Mark Margevicius and Michael Silver write, "Lockdown is not viable for many organizations, because many users cannot work within the constraints of a locked-down PC..."²

InstallFree's Virtual (IFV) Applications and Desktops enable organizations to reduce the TCO of PCs by locking them down, while improving end-user productivity. InstallFree's unique technology creates a virtual application that contains the complete set of resources required in order to function with no dependencies on the host computer's operating system. IFV applications are never installed on the host computer and can run across a variety of environments including Windows XP, Vista and server-based computing operating system environments including Citrix XenApp, Windows Terminal Server and Windows-based Virtual Machines.

Reducing Desktop Management TCO with InstallFree

Gartner has conducted several studies on reducing the TCO of desktops and notebook computers. They have created four scenarios which assume different levels of manageability of the PC and TCO associated with each scenario:

- Base — This is a wide-open scenario. Users can install applications and change settings, with little to no management tools used.
- Somewhat managed — Some management tools, but light on process and policy.
- Moderately managed — Tools and good processes and policies, but users can install software and change at least some settings.
- Locked down and well-managed — Liberal use of tools, established processes and policies in place, and users are locked down and cannot install software or change critical settings.³

Based on these scenarios, Gartner has developed an analysis that shows the TCO of desktops and notebooks and the savings that can be obtained when improving the manageability in each scenario.

Desktop vs. Notebook TCO: Different Users Mix	Desktops				Notebooks: Day Extenders				Notebooks: Traveling Workers			
	Base	Somewhat Managed	Moderately Managed	Locked Down and Well-Managed	Base	Somewhat Managed	Moderately Managed	Locked Down and Well-Managed	Base	Somewhat Managed	Moderately Managed	Locked Down and Well-Managed
Hardware & Software	\$ 1,312	\$ 1,293	\$ 1,271	\$ 1,226	\$ 1,515	\$ 1,495	\$ 1,472	\$ 1,425	\$ 1,525	\$ 1,505	\$ 1,482	\$ 1,435
IT Ops. Labor	690	639	572	438	1,045	961	861	661	1,092	1003	899	879
Admin Labor	216	215	214	210	263	263	261	259	282	281	280	276
Direct Costs	\$ 2,218	\$ 2,147	\$ 2,056	\$ 1,874	\$ 2,823	\$ 2,719	\$ 2,594	\$ 2,344	\$ 2,899	\$ 2,790	\$ 2,660	\$ 2,590
End-User Costs	\$ 3,649	\$ 3,122	\$ 2,594	\$ 1,539	\$ 6,400	\$ 5,473	\$ 4,545	\$ 2,689	\$ 7,023	\$ 6,004	\$ 4,983	\$ 4,440
TCO	\$ 5,867	\$ 5,269	\$ 4,650	\$ 3,413	\$ 9,224	\$ 8,192	\$ 7,139	\$ 5,033	\$ 9,923	\$ 8,793	\$ 7,643	\$ 7,030

Source: Gartner (March 2008)

Moving from a base unmanaged configuration to a locked-down, well managed environment can dramatically improve the TCO of both desktops and notebook computers.

The next table shows the percent reduction of TCO indicating that when moving to a locked-down environment, corporations can reduce their TCO of notebook computers by as much as 45%. For companies large and small, this represents a significant improvement in lowering TCO as well as gaining additional benefits from locking-down computers such as increased security, reliability and performance.

TCO Percent (%) Reduction Moving to Locked-down Computers⁴

Desktop vs. Notebook TCO Reduction (%)	Desktops				Notebooks: Day Extenders				Notebooks: Traveling Workers			
	Base	Somewhat Managed	Moderately Managed	Locked-down	Base	Somewhat Managed	Moderately Managed	Locked-down	Base	Somewhat Managed	Moderately Managed	Locked-down
TCO	\$ 5,867	\$ 5,269	\$ 4,650	\$ 3,413	\$ 9,224	\$ 8,192	\$ 7,139	\$ 5,033	\$ 9,923	\$ 8,793	\$ 7,643	\$ 7,030
Reduction (%) going to locked-down	42%	35%	27%	0%	45%	39%	29%	0%	29%	20%	8%	0%

Using Virtual Applications to Further Reduce TCO

In addition, Gartner released a study that examines the impact of using application virtualization within those scenarios and the TCO impact. When using virtual applications in conjunction with locking-down the computer, IT administrators can obtain even higher levels of TCO reduction for the organization.

Virtualized applications can further reduce costs for IT departments by drastically reducing application life-cycle tasks including install, update, uninstall, and regression testing for desktop applications. In traditional computing environments, IT must perform several application life-cycle tasks including extensive regression testing on applications to ensure they do not conflict with other applications or the operating system in which they are running. Virtualizing the application virtually eliminates the need to test the applications against each other because they operate in their own self contained environments. Gartner says, "Virtualized applications can reduce the cost of testing, packaging and supporting an application by 60%, and they reduced overall TCO by 5% to 7%."⁵

Incremental Savings (Cost) of Application Virtualization Within a Level of Management	Unmanaged With 20% Web/Thin		Moderately Managed With 20% Web/Thin and 80% Virt.		Locked and Well-Managed, 20% Web/Thin, Rest Traditional SD		Locked, Well-Managed, 20% Web/Thin, 80% App. Virt.	
	Unmanaged With 20% Web/Thin	Unmanaged With 20% Web/Thin and 80% Virt.	Moderately Managed With 20% Web/Thin and 80% Virt.	Moderately Managed With 20% Web/Thin and 80% Virt.	Locked and Well-Managed, 20% Web/Thin, Rest Traditional SD	Locked, Well-Managed, 20% Web/Thin, 80% App. Virt.	Locked and Well-Managed, 20% Web/Thin, Rest Traditional SD	Locked, Well-Managed, 20% Web/Thin, 80% App. Virt.
Hardware & Software		-0.2%		-0.2%		-0.3%		-0.3%
IT Ops. Labor		14.3%		10.4%		6.4%		6.4%
Administration Labor		19.4%		19.2%		19.2%		19.2%
Direct Costs		6.2%		4.9%		3.6%		3.6%
End-User Costs		7.6%		7.5%		7.3%		7.3%
TCO		7.1%		6.3%		5.2%		5.2%

Source: Gartner (April 2008)

Improving End-User Productivity

One of InstallFree's core operating principles is to ensure that the end-user's experience is not diminished. With IFV applications, end-users can work on locked-down computers and still be able to utilize all of the application's features, as if they were running the application with administrative privileges. This enables them to customize applications, install add-ons and new software as well as perform application updates without the assistance of the IT administrator. As a result, the end-user's experience and productivity remain unchanged compared to a conventional desktop computing environment.

IFV applications have no dependencies on the host computer. Nothing ever has to be installed on the host PC or the server in which IFV applications are managed. This increases productivity because the end-user can access their complete set of personalized applications without ever requiring a client, agent or virtual machine to be installed on the host computer.

In addition, IFV applications can be accessed anywhere via the LAN, Internet or USB portable storage device ensuring the end-user has complete autonomy and productivity in any location online or offline. This roaming profile enables end-users to maintain a consistent computing experience whether at work, home or on the road with access to their complete set of personalized applications and desktop. For example, with IFV applications, an end-user can access their personalized applications while working on a public locked-down computer in an airport in Tokyo. The end-user can simply insert their USB storage device into the PC and their desktop comes up with all their personal settings in English with no limitations, without ever installing software or leaving any data footprint on the host computer, increasing their productivity and security.

Conclusion

InstallFree's application virtualization solutions overcome the classic struggle of reducing PC TCO by locking-down the computer and end-user productivity. InstallFree's unique technology allows IT administrators to lock-down PCs preventing any changes or software installations to the core operating system yet enables end-users to work within their IFV applications with complete autonomy and full PC functionality. "InstallFree offers a solution that, for many organizations, can address the often incompatible give-and-take between IT and users by giving both constituents the freedom, ease of use and security they require," observed Michael Rose, a research analyst covering virtualization at IDC.

¹ *Notebook Total Cost of Ownership: 2008 Update*, Federica Troni, Gartner, February 20, 2008

² *TCO Comparison of PCs With Server-Based Computing*, Mark Margevicius, Michael Silver, Gartner, June 15, 2006

³ *Notebook Total Cost of Ownership: 2008 Update*, Federica Troni, Gartner, February 20, 2008

⁴ *Tookit Best Practice: TCO Comparison of Desktops vs. Notebooks*, 2008 Update, Federica Troni, Gartner, March 18, 2008

⁵ *TCO of Traditional Software Distribution vs. Application Virtualization*, Michael A. Silver, Terrence Cosgrove, Mark A. Margevicius, Brian Gammage, Gartner, April 16, 2008

About InstallFree

InstallFree provides application virtualization software used by enterprises to lower the cost and complexity of delivering and managing applications while increasing portability and compatibility of applications. InstallFree stands alone in offering an approach that requires no infrastructure changes to realize these benefits. Designed for Users. Built for IT.

To learn how InstallFree can address your IT and Corporate challenges by simplifying application delivery and management tasks, visit us at www.installfree.com or call (203) 276-1460.