



## The Government Enterprise — Bottom-line Business

## Executive Summary

Government Information Technology (IT) program managers and senior decision makers remain focused on reducing the Total Cost of Ownership (TCO) for information systems within agencies at the Federal, state, and local ranks. Despite the fact that government IT budgets remain at significant levels — approximately \$99 billion for fiscal year 2004 — budget growth is matched by an increase in tight financial controls. Federal agencies continue to spend significant time and effort on Exhibit 300s to justify the business case for major FY05 technology initiatives. State and local governments continue to pull out of the fiscal consequences of the economic downturn.

Within this tight fiscal environment, IT decision makers at the Federal, as well as state and local levels, need proven TCO-reducing strategies. The most significant gains will come not from shaving resources at the fringe, but rather holistic approaches that drive directly to the most significant IT investment and recurring expenses.

Looking at the total IT budget for a single year in an agency of 1,000, it requires nearly \$2.72 million just to run in place. Consolidating the infrastructure into an enterprise architecture based upon Citrix Systems, however, cuts 42 percent out of the maintenance components of an infrastructure, freeing those resources for progress:

<b>Table 1: The Citrix TCO Taxonomy</b>			
<b>Activity</b>	<b>Annual Cost</b>	<b>With Citrix</b>	<b>% Savings</b>
Administration, Operations, Support, and Training	\$1,798,900	\$884,340	51%
Server Hardware	\$300,000	\$225,000	25%
Client Hardware	\$272,560	\$163,460	40%
Application Purchase and Upgrade	\$218,000	\$213,600	2%
Network Connectivity	\$126,000	\$81,000	35%
<b>Total</b>	<b>\$2,715,460</b>	<b>\$1,567,400</b>	<b>42%</b>

The Citrix® MetaFrame® Access Suite offers a comprehensive application and information delivery approach that enables government employees to easily and securely access the agency's IT assets on demand while enabling IT planners to centrally manage information systems. Citrix provides secure access for over 160,000 organizations worldwide, enabling on-demand, unlimited access to critical information — regardless of geographic location, client device, network connection, or application platform.

## The Government Enterprise: Bottom-line Business

Government IT program managers and senior decision makers remain focused on reducing the TCO for information systems within agencies at the Federal, state, and local ranks. Despite the fact that government IT budgets remain at significant levels — approximately \$99 billion for fiscal year 2004 — budget growth is matched by an increase in tight financial controls.

### **Federal Spending**

Indeed, financial controls on Federal IT spending continue to grow in both number and complexity. Federal agencies continue to spend significant time and effort on Exhibit 300s to justify the business case for major FY05 technology initiatives. In 2003 alone, the Office of Management and Budget (OMB) halted more than 700 IT projects for failing to complete the required business cases analysis or for failing to meet minimum Return on Investment (ROI) thresholds for approval. Over the coming months, OMB will examine every IT investment request to compare, contrast, combine, compete, or cut out of the Federal IT budget. As a result, reducing TCO remains a top priority for government executives, program managers, and IT managers.

### **State & Local Spending**

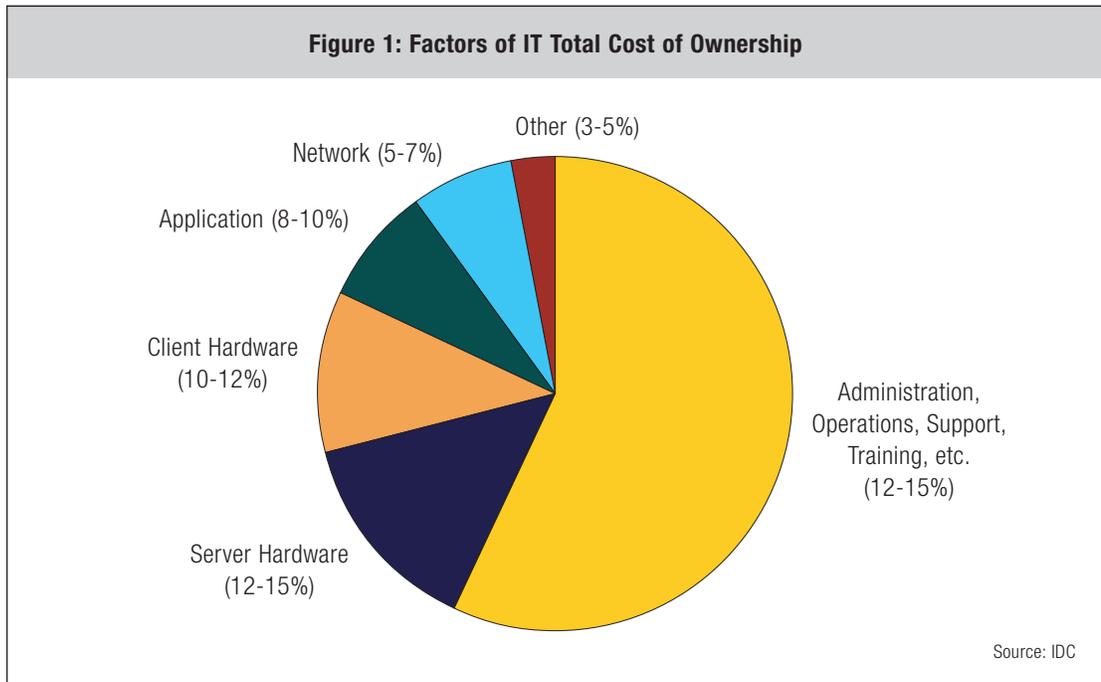
State and local governments continue to pull out of the fiscal consequences of the economic downturn, with the National Conference of State Legislatures (NCSL) reporting that 32 states posted minimal surpluses for FY04. Far from swimming in resources, state governments have earned surpluses at a significant cost to state programs, and the limited surpluses are largely the result of improved collections in major revenue categories and the difficult paring of key programs.

Though the budget environment is improving — NCSL reports that 13 states will post a major deficit for FY05 — significant increases in IT budgets remain distant. State and local budgets typically run on 18- to 24-month planning cycles, with the forthcoming year's budget based upon the previous year's revenue. In addition, the impact of some of the strategies and decisions made to meet required balanced budgets will have a long-term impact on the respective government's flexibility and capability to direct new funding to IT resources. The need to "do much more with much less" may be with us for some time.

Within this tight fiscal environment, IT decision makers at the Federal, as well as state and local levels, need proven TCO-reducing strategies. The most significant gains will come not from shaving resources at the fringe, but rather holistic approaches that drive directly to the most significant IT investment and recurring expenses. Understanding the taxonomy of IT spending is the first step in driving toward this holistic approach.

## TCO: A Cost Taxonomy

According to IDC, a leading IT industry analysis firm, as a percentage of TCO, hardware and software expenditures together comprise less than a third of total IT cost. In contrast, administration, operations, support, and training can easily double software and hardware expenses, consuming up to 66 percent of an agency IT budget.



### ADMINISTRATION, OPERATIONS, AND SUPPORT

The average salary for an IT worker in 2004 topped \$70,000, not including benefits, taxes, and non-monetary payments. Fully loaded, the total compensation costs may reach upwards of \$90,000 per year, or \$45 for every hour in the standard workweek. The Information Technology Association (ITAA) and Mercer Management Consultants report that the average IT worker in the United States supports 27 employees. Even considering the significantly higher ratio in the public sector — perhaps double the industry average — an agency of 1,000 employees may pay \$1.8 million per year in IT salaries.

While these salaries ensure the successful operation of the agency, they remain the single largest cost component of most agency IT budgets. The net result is that IT decision makers and agency executives must allocate these high-value resources judiciously. In most cases, most IT staff time is focused on supporting the existing infrastructure — as opposed to developing and implementing new systems — including hardware, software, network, and user management.

### **Hardware Management**

Setting up a new rack-mounted server from individual components often requires in excess of 30 hours for a trained technician to complete. Beyond time required to implement a functioning server, daily, weekly, and monthly maintenance and upkeep for that server may necessitate an additional 15 hours per month, or \$675 in staff time. Such costs are not inclusive of application management, which may require substantially more time to address.

While setup and maintenance of the server infrastructure remains a significant cost, it pales in comparison to the resources required to maintain the PC client infrastructure. An “out of the box” setup for a single client machine often takes a skilled technician more than two hours to execute. Beyond this initial setup time, Gartner, a leading IT industry analysis firm, estimates that administrators will spend an additional hour per year, per machine on hardware maintenance. Considering that the number of client machines within an organization often dwarfs the number of servers, maintaining each PC may consume more than 80 hours per month for an agency of 1,000 at a cost of \$3,600.

### **Application Management**

As a category of cost, application management remains the single largest cost contributor within the IT budget. While it may cost \$2,200 to purchase Microsoft® Server™ 2003 Enterprise Edition, it may run in excess of \$14,400 per year to patch, according to *CSO Magazine*. This does not include the time required to test the patch within the environment, which may require an additional two hours on a test system prior to implementing each fix.

Yet again, the cost of patching servers pales in comparison to the time and resources required to update the PC client population. The Yankee Group estimates a cost of \$234 per desktop, per patch. Across an agency infrastructure of 1,000 clients, patching costs quickly escalate at \$234,000 per incident. Considering that a single application, Microsoft® Internet Explorer® for example, may have several patches in a year, touching every client rapidly consumes critical IT resources.

### **Network Management**

Without question, agency downtime is vastly more expensive than the time spent ensuring that connectivity. Though not as significant as application management, optimizing network traffic and ensuring “five nines” service levels for mission-critical government services requires allocating significant resources. Dedicating two full-time resources to ensure agency-wide connectivity and response drives an immediate cost of \$180,000 per year. Adding in additional resources for emergency response or new projects can require an additional \$90,000 per year, or the equivalent of 2,000 additional staff hours.

### **User Management**

Setting up new users often necessitates traveling to remote offices throughout the nation or state, or staging IT resources in multiple locations — either of which is a costly alternative. Including travel, the average setup time for a new user often exceeds four hours. This includes basic requirements such as a network and e-mail account, in addition to file rights and share on both the network and client machines. Assuming a 10 percent staff turnover for an agency of 1,000 in any given year — low for some government agencies — this necessitates setting up 100 new users at a total cost of \$18,000.

Once initial setup is complete, new users require training on applications and systems. Though the complexity and length of training programs vary by the number of applications within an IT environment, bringing a new non-IT staff member up to speed will require between 10 and 20 hours of IT systems training.

Further, once a new staff member has been set up and trained, they must be maintained along with the rest of the user population. Gartner Research finds that handling a single help desk query costs an average of \$20 to \$30, which is estimated to be \$88 to \$745 in annual help desk costs per user. Looking at the median cost of \$418 per user means that an agency of 1,000 spends \$418,000 per year on user maintenance.

Finally, the cost of maintaining a robust information security posture cannot be discounted. The Computer Security Institute conducted a survey of 538 computer security practitioners in corporations, government agencies, financial institutions, medical institutions, and universities in the United States. The results revealed that 85 percent of respondents had detected computer security breaches within a 12-month period. The 35 percent who listed a financial impact reported \$377,828,700 in financial losses.

<b>Table 2: Administration, Operations, Support and Training</b>		
<b>Activity</b>	<b>Annual Cost</b>	<b>% Of Budget</b>
Hardware Management		
Servers (8)	\$64,800	3.6%
Client Population (1,000)	\$73,000	4.1%
Application Management		
Servers (8 with 2 patches/updates)	\$230,600	12.8%
Client Population (1,000 x 3 patches/updates)	\$702,000	39.0%
Network Management	\$270,000	15.0%
User Management		
Setup	\$18,000	1.0%
Training	\$22,500	1.3%
Help Desk	\$418,000	23.2%
<b>TOTAL</b>	<b>\$1,798,900</b>	<b>100%</b>

## SERVER AND STORAGE HARDWARE

Without question, the cost of computing power continues to decline at a steady pace. While this cost does decrease, however, it does not decrease in a linear fashion, with prices dropping at varying rates based upon the server infrastructure required. As a result, acquiring a single Hewlett-Packard ProLiant DL760 G2 server remains cheaper than purchasing four ML 370 servers to handle the same processing load.

Refreshing the eight-enterprise server infrastructure on a three-year basis provides for the purchase of two-and-one-third new servers for the architecture in a year, including the associated storage, networking, power backup, and physical infrastructure. Moreover, given the continuing decline of processor costs, this cost will continue to decline with next year's dollar, providing more server value than this year's.

On a three-year refresh, industry analysts at IDC indicate that an agency of 1,000 may spend approximately \$300,000 in a given year on server and storage infrastructure investments.

### CLIENT HARDWARE

Where the three-year refresh for server infrastructure will necessitate replacing just a small number of machines, a typical three-year refresh for client machines will require the purchase of 333 and one-third client PCs every year. Considering a standard desktop within the public sector environment, a Hewlett-Packard D220 Microtower, the cost for each purchased machine may reach \$820 on a government contract, for a total annual cost of \$273,000.

### APPLICATIONS

The actual purchase — as opposed to updating and patching — of application software varies based upon the complexity of the underlying mission objective that the software supports. Assuming a Microsoft® Windows® Office® upgrade at approximately \$328 per user or an Oracle user license for \$120, it is possible to assume an annual application purchase or upgrade budget of \$220 per user for a total annual cost of \$220,000 for an agency of 1,000 users.

### NETWORK CONNECTIVITY

As with processing power, the cost of network bandwidth continues to drop across the marketplace. For calendar 2004, the average cost of a network connection operating at 1.5 Mbps — a standard T1 line — was \$750. Looking at a statewide government agency or a national agency with seven offices in different geographies, maintaining 3 Mbps of bandwidth per office requires a monthly networking expense of \$10,500. Across the year, this equates to \$126,000 per year to maintain robust network connectivity to each office.

**Table 3: The Base Case TCO Taxonomy**

<b>Activity</b>	<b>Annual Cost</b>	<b>% Of Budget</b>
Administration, Operations, Support, and Training	\$1,798,900	66.4%
Server Hardware	\$300,000	11%
Client Hardware	\$272,560	10%
Application Purchase and Upgrade	\$218,000	8%
Network Connectivity	\$126,000	4.6%
<b>Total</b>	<b>\$2,715,460</b>	<b>100%</b>

## The Citrix MetaFrame Access Suite

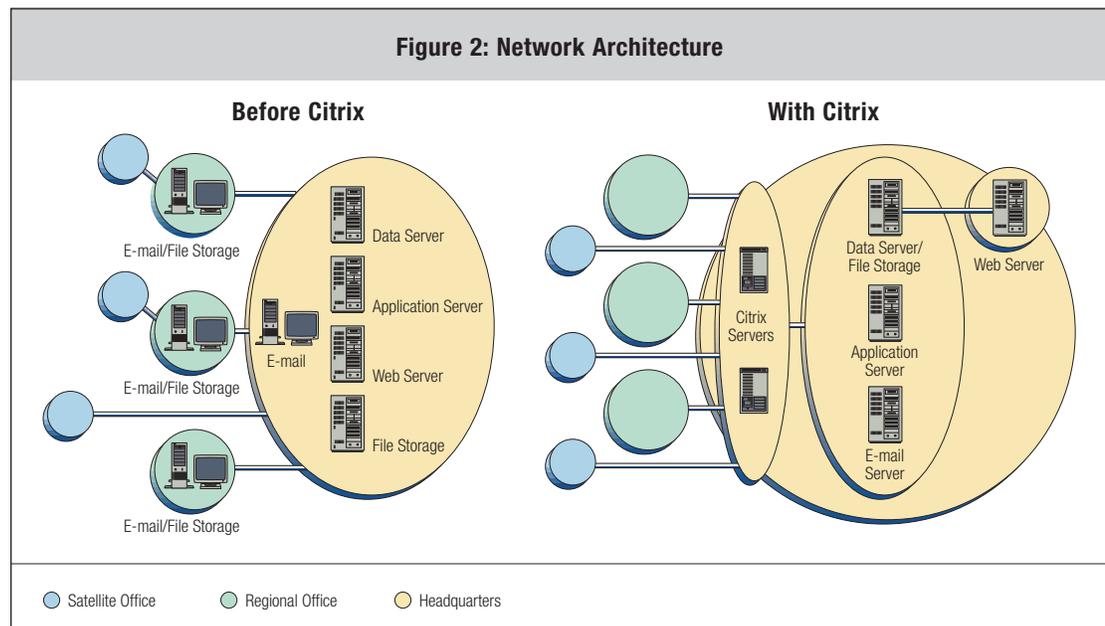
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## Driving Down TCO with the MetaFrame Access Suite

Harnessing the Citrix MetaFrame Access Suite, the IT staff can transform a geographically disparate information infrastructure into a centrally-managed system deployed from a single physical location without any reduction in application functionality or user productivity. Centralized deployment, maintenance, and management not only reduces the costs associated with deploying server, client, and network hardware to multiple locations, it also dramatically reduces the cost of operations and system management — the largest cost associated with information systems.

### SERVER HARDWARE

The savings associated with reducing the number of servers distributed across the infrastructure are reasonably straightforward. Rather than setting up eight servers — five centrally managed and three distributed across the infrastructure — Citrix enables IT staff to manage the same application and data load on six servers operating at a single location.



As a net result, the IT team saves the explicit costs of computing hardware for two servers. In the case of Hewlett-Packard ML 370 servers, the immediate savings accrued from eliminating two servers — just the computing components — exceed \$12,000 in year one. At the same time, the IT team also saves on the supporting server hardware previously deployed at five geographic locations. These items include necessities such as battery systems (\$1,200 each), storage arrays (between \$200 and \$5,000), network routing equipment (\$1,000 per server), as well as keyboards, monitors, and mice (between \$50 and \$200 per item).

Further, the consolidated system allows network architects to take advantage of economies of scale in computing power, potentially eliminating another data, mail, or application server based upon load and processing availability. In sum, the 25 percent reduction in servers — from eight to six — will result in a similar or better reduction in server TCO for a net savings of \$75,000 in annual storage and server hardware costs.

## **NETWORK CONNECTIVITY**

The Citrix MetaFrame Presentation Server translates centrally processed applications and data into screen images delivered via any type of network connection. The end user at the client machine alters that screen image with keystrokes and mouse clicks, which are transmitted back to the MetaFrame Presentation Server and translated into changes in data on the application server. Critically, with Citrix, the actual data never leaves the data center — only the rasterized, graphic image of the data is sent to the user with only changes to that screen image returned to the consolidated computing center.

The resulting network traffic — images, keystrokes, and mouse clicks — is extremely bandwidth thrifty, requiring just a fraction of the network infrastructure required to move actual data components from one machine to another.

For example, the United States Air Force Personnel Command (AFPC) utilized components of the Citrix MetaFrame Access Suite to deploy data-intensive information from the Military Personnel Data System (MilPDS) to more than 180 locations around the globe. Prior to using Citrix MetaFrame Presentation Server, transmitting a single roster from the Oracle 9i database might require as long as three hours — or 180 minutes. Using Citrix, AFPC reduced transmission time to 30 minutes, a bandwidth savings of 83 percent.

Although it is not feasible to put every government employee on a dial-up line despite the significant bandwidth savings with Citrix, it is possible to eliminate five of the 1.5 Mbps T1 lines from the network architecture of the 1,000-employee agency. This nets the agency monthly savings of \$3,750, for an annual reduction in TCO of \$45,000 for the category of network connectivity.

## **APPLICATIONS**

Despite the significant consolidation of server and network infrastructure, the actual cost savings associated with the applications component of TCO, while important, are nominal compared to the hardware and management savings. Reducing the number of servers does cut enterprise server licensing by the annual fraction of two \$2,200 machines; the typical user-based software licensing employed by most software publishers will not decline significantly regardless of the consolidated or distributed architecture.

That said, centralizing the architecture does offer IT leaders the ability to rationally consolidate the often heterogeneous application population. This would naturally result in some reduction of licensing and administration

costs associated with a large variety of applications. All told, however, such gains should be attributed to the decision maker capable of driving such change as opposed to any technology solution that might create a positive environment for that change.

## **CLIENT HARDWARE**

Using server-based application and data processing demands less processing, memory, and storage capacity from every machine in the client population. Citrix client software requires only a minimal memory footprint and just a small fraction of actual application software. All of the intensive processing is managed by the network components most capable of robust computation — high-powered servers.

This provides two important benefits to IT decision makers:

- The client population does not have to be upgraded for each leap in application processing requirements
- The client population does not have to be refreshed as quickly to keep up with the constant evolution in software applications

In a traditional client-server environment, client machines require perpetual upgrades — often outside of the traditional PC refresh — to meet the processing and memory demands of new applications. For example, upgrading from Microsoft Windows® 2000 to Microsoft Windows XP Professional requires 120 Mhz more processing speed, twice the system memory, and a Super VGA video monitor. Moreover, given the diversity of proprietary and commercial software on each desktop, it is increasingly difficult to anticipate the schedule of upgrades across the client infrastructure.

Citrix software solutions employ a server-based architecture, such that the heaviest processing load occurs on the machines most capable of managing that load — enterprise servers. By shifting the processing requirements from the client to the server, Citrix reduces the memory and processing requirements for end-user machines. Even processing-heavy applications such as databases and large spreadsheets can be deployed to machines capable of running just a common Web browser.

When the Government Employee Hospital Association (GEHA) sought to upgrade its case management software to a 32-bit application, the association faced the prospect of having to replace every PC to support the new and more powerful version, at an estimated cost of nearly \$2 million. Besides the desire to avoid this expenditure, GEHA also wanted to provide higher-performance access to mobile users, who were connecting via dial-up, and to allow select employees to work from home. By switching to a Citrix software solution for deployment of the new application, GEHA saved — net of server and software costs — \$1.25 million by maintaining the existing client population.

Looking at the more routine practice of annual PC refresh, Citrix solutions extend the life of the existing infrastructure, enabling IT leaders to slow the refresh rate. Readily operating on machines with 200 Mhz engines, perpetual upgrades to higher processing speeds and more memory are no longer a pressing necessity. More tangibly, a Citrix solution allows an agency of 1,000 users to move from a 3-year PC refresh rate to a 5-year PC refresh rate. The increased span reduces the number of PCs purchased each year from 333 to 200, saving \$109,100 in the category of client hardware.

## ADMINISTRATION, OPERATIONS, AND SUPPORT

Though the savings in the hardware, software, and network components in an access infrastructure environment are significant, they represent less than 75 percent of the savings in administration, operations, and support. Citrix directly addresses the most significant operating costs for advanced IT systems, reducing the staff and management requirements associated with a distributed client-server architecture.

### Network Management

Despite the decrease in the bandwidth required to deploy applications in a Citrix environment, network administration costs cannot be expected to decline significantly. Understanding that agencies will still opt to dedicate two full-time resources to ensure agency-wide connectivity and response, we would not expect any savings on either the \$180,000 per year for two full-time staff or the \$90,000 per year for 2,000 additional staff hours of emergency response capability.

### Hardware Management – Server Infrastructure

Starting with administration of the server infrastructure, the 25 percent reduction in the number of servers results in a linear reduction in server hardware setup expenses. These savings accrue from cutting 60 hours for a trained technician to set up servers, and eliminating \$1,350 per month in staff maintenance time for each server. This savings, a total of \$16,200 for the reduction in server hardware, does not include the additional value accrued from consolidating the server infrastructure in a limited number of locations.

As mentioned above, physically consolidating servers significantly reduces the travel and staff requirements for remote locations. Rather than deploying a valuable technician to a different office, at the expense of costly downtime for travel, all of the servers are located in a limited number of locations — facilitating rapid, centralized access to the assets.

Further, the \$16,200 savings does not incorporate the possibility of logical consolidation; that is, the consolidation of multiple, low-power servers into a single, more powerful machine. Such consolidation, now a widespread phenomenon for application and e-mail servers, would further reduce the cost by \$8,100 to \$16,200 per year.

### Hardware Management – Client Infrastructure

Looking at the expensive maintenance requirements for client machines, Citrix cuts the setup and maintenance requirement for each desktop by executing application deployment and installation from the server. While an “out of the box” setup for a single client machine often takes a skilled technician more than two hours to execute in a traditional client-server environment, it requires roughly 30 minutes using Citrix.

The Florida Guardian Ad Litem Office, a statewide agency, deployed its statewide IT infrastructure using Citrix MetaFrame Access Suite to avoid the costs associated with client setup. Using the alternative traditional approach — a distributed design with 20 to 30 servers in the statewide network — would have been too costly, resource-intensive, and time-consuming for the office to execute. Configuring its more than 500 client devices would have required technicians to physically touch every machine, demanding hundreds of man-hours. In contrast, setting up a new machine via Citrix takes only 30 minutes.

Reducing the setup time by 75 percent to match the success of the Florida Guardian Ad Litem Office eliminates an additional \$39,960 in annual cost. To compound the cost savings, given the reduction in the PC refresh rate from 333.3 new machines every year to 200, setup costs are further reduced by \$5,320 to address the smaller number

of machines requiring setup every year. Adding both maintenance and setup, Citrix reduces the total cost of client hardware maintenance by 62 percent.

### **Application Management**

In the traditional client-server environment, the cost of application management totaled just under \$1 million for an agency of 1,000 users. Primary cost drivers included server upgrades, client upgrades, and emergency patch management. These costs were driven higher by the necessity to touch every client machine to administer a patch at the cost of \$234 per machine per patch.

Starting with the server infrastructure, Citrix access infrastructure software reduces the total cost of server patches by reducing the total number of servers. With just six servers instead of eight, the cost of server patching drops by \$57,600 given the same infrastructure requirements. At the same time, however, Citrix MetaFrame Access Suite reduces the cost per patch, per server by consolidating the server infrastructure in the same physical location. Rather than deploying staff to each server location, or maintaining high-value staff at remote offices, centralized patching makes the IT staff more efficient — completely eliminating travel time.

Continuing to benefit from centralized patching, in a Citrix access infrastructure environment, IT staff no longer have to touch every PC to execute a software change. With all application deployment from a consolidated server farm, technicians simply update the servers with the new patch. The updated version is then deployed to users during the next login — without the user even knowing that the application has changed.

Citrix access infrastructure eliminates the single largest cost component of an IT budget — application maintenance and patch management. At \$234 per patch, per machine in a traditional client-server environment, application management consumed nearly three quarters of a million dollars. In a Citrix environment, however, no patches or upgrades are executed on the client machines, eliminating the entire category of cost. Moreover, the Citrix solution eliminates the added business and security costs associated with using multiple versions of applications, delivering upgrades consistently and evenly across the entire infrastructure from the consolidated server farm.

### **User Management**

Centralizing users in a single physical location is rarely a strategic option for Federal, state, and local agencies serving a distributed population. Yet while consolidating the workforce is not an option, consolidating the IT infrastructure using Citrix access infrastructure does eliminate many of the problems associated with managing a geographically dispersed user population.

Holding the 10 percent staff turnover constant for the agency of 1,000, IT staff will have to set up accounts and systems for 100 users in any given year. With Citrix access infrastructure, setup time for each user — handled centrally at the server infrastructure — requires just 30 minutes on average, eliminating nearly 83 percent of the staff costs for new user setup. In addition, with access to the server managed via a Citrix ICA® client or a simple Web browser, no desktop setup is required. With Citrix access infrastructure, an agency saves \$13,500 on user setup.

While application-focused training requirements do not change within the Citrix environment, the application interface does not significantly change within a Citrix deployment. Users interact with the same icons and application interface as they would see on a local desktop, with the back-end infrastructure entirely transparent. Little, if any, additional training is required.

As new employees enter the general user population, the Citrix MetaFrame Access Suite software significantly reduces the help desk requirements to support those users. Research from EMA, an industry analysis firm, estimates that password management consumes as much as \$250 per user per year in help desk costs, driving a total cost of \$250,000 for an agency of 1,000, or more than half of help desk costs.

Citrix® MetaFrame® Password Manager, a component of the MetaFrame Access Suite, provides password security and single sign-on access to Windows, Web, proprietary, and other host-based applications running in the Citrix environment. Users simply log in to their Citrix account, and all passwords to commercial and proprietary e-mails populate as required, without requiring the user to remember each password. This Single Sign On (SSO) solution not only reduces the number of passwords that any user must remember (and the number the administrators must reset), it also enables the IT team to set a single, very strong password for users. Reducing password management costs by a conservative \$62.50 per user results in a net help desk savings of 15 percent.

#### **Savings in Administration, Operations, and Support**

Citrix provides the most significant cost savings in the infrastructure in the costliest component of IT management. Comparing the base administration, operations, and support costs with the same costs within an IT infrastructure yields the following table:

<b>Table 4: Administration, Operations, and Support Comparison</b>				
<b>Activity</b>	<b>Annual Cost</b>	<b>Cost With Citrix</b>	<b>Citrix Cost Savings</b>	<b>% Saved</b>
Hardware Management				
Servers (6)	\$64,800	\$48,600	\$16,200	25%
Client Population	\$73,000	\$27,720	\$45,280	62%
Application Management				
Servers	\$230,600	\$155,520	\$75,080	33%
Client Population	\$702,000	\$0	\$702,000	100%
Network Management	\$270,000	\$270,000	\$0	0%
User Management				
Setup	\$18,000	\$4,500	\$13,500	75%
Training	\$22,500	\$22,500	\$-	0%
Help Desk	\$418,000	\$355,500	\$62,500	15%
<b>TOTAL</b>	<b>\$1,798,900</b>	<b>\$884,340</b>	<b>\$914,560</b>	<b>51%</b>

## Allocating Resources for Progress

Within the government agency environment, IT and executive leaders must carefully weigh the cost of maintenance against the cost of progress. In any given budget cycle, an enormous level of resources is allocated just to stay in the same place, with little opportunity to invest significantly in future initiatives to improve service to the citizen. Citrix access infrastructure empowers government agencies to break free from this status quo model.

Looking at the total IT budget for a single year in an agency of 1,000, it requires nearly \$2.72 million just to run in place. Consolidating the infrastructure into an enterprise architecture based upon Citrix, however, cuts 42 percent out of the maintenance components of an infrastructure, freeing those resources for progress:

<b>Table 1: The Citrix TCO Taxonomy</b>			
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The net result is an additional \$1.15 million to invest in IT programs that deliver greater value to agency stakeholders. As an enterprise-level decision, Citrix access infrastructure enables the Chief Information Officer (CIO) to become a strategic member of the agency executive focused on improving agency mission performance rather than simply maintaining agency tools. More importantly, it directly aligns technology to the underlying business processes that it was created to support.

As government agencies continue to evaluate growing IT budgets within the framework of business-based financial models, Citrix access infrastructure enables IT leaders to demonstrate tangible ROI and optimal TCO. With validated savings in hand, IT leaders will survive — and indeed flourish — in the current and future budget cycles, with room to make progress against agency goals.

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