

INDUSTRY BRIEF: FEDERAL GOVERNMENT

Enhancing the Efficiency of Your IT Infrastructure

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Executive Summary

Challenge

Federal agencies are taking steps to comply with Office of Management and Budget (OMB) requirements to consolidate services, share data and offer more online services to citizens, businesses and government employees. Yet, during every budget cycle, you are expected to do more, often with the same budget or less. Since maintaining and operating your existing mainframe and distributed systems takes over 70 percent of your IT budget¹, you must continuously increase efficiently to find funding for new initiatives.

Opportunity

CA offers a broad array of solutions that can improve your ability to plan capacity and use your IT resources more efficiently — from applications to desktop systems, servers, virtual servers, backup systems and communications infrastructure. CA solutions are also available to help you analyze your energy usage, allowing you to make more efficient use of energy resources and reduce energy costs.

Benefits

CA solutions help you provide IT services in an efficient and cost-effective manner with excellent performance and reliability, thus allowing more of your resources to be used for strategic initiatives that support your agency's mission. Benefits can include:

- Higher productivity and efficiency across your agency
- Lower costs to operate, support and maintain your IT infrastructure
- Increased ability to support new initiatives
- Greater management recognition and respect for IT as processes mature and service quality improves allowing IT to become a true business partner

¹ cioupdate.com, New Initiatives Spending Versus Keeping the Lights On, January 2008

Agencies Need to Deliver More Timely Services for Less

Government agencies are asking more of IT. Increasingly, you are being tasked with supporting the consolidation of services across departments and agencies and sharing information and resources to reduce costs. At the same time, you must create new online services in a more timely fashion for citizens, businesses and federal employees.

Yet, given the current budget conditions, funding for new projects may be difficult to obtain. By operating your IT resources in a highly efficient manner, you have an opportunity to not only reduce your operational expenditures for servers, networks, applications and other resources, but to also lower energy, facilities and human resources costs. As a result, you can pay for upgrades, improvements and new projects with savings on existing operations.

IT Must Do More

Despite the current budget constraints, you are facing greater demands to extend existing agency services and provide new ones online. The OMB is calling for you to support the Federal Enterprise Architecture (FEA) to reduce duplication of services and share information within and across agencies to lower overall government IT costs. At the same time, citizens, businesses and government agencies are demanding that agencies offer more and better services along with greater transparency and accountability.

Many agencies have responded by offering online transaction capabilities for service personnel and citizens and robust and timely information to businesses, 24 hours a day, 7 days a week. The U.S. Army, for example, is working to deliver critical data to personnel on the ground to help them complete their missions. IT plays a crucial role in delivering these services to both internal and external constituents.

IT Must Deliver Services at a Lower Cost

Government agencies have already taken steps to reduce IT costs. Many agencies have begun deploying shared services and service centers to support human resources, payroll, financial services and more. They are consolidating data centers to reduce their numbers and associated costs. Agencies are even reducing the numbers of Internet connections to simplify security.

Despite successfully completing these measures, much more remains to be done. Obtaining budgets for new developments and services is likely to become more difficult because of the current economic crisis unless they relate directly to the new administration's agenda.

Greater Efficiency Can Help

Today, IT organizations typically spend over 70 percent of their resources maintaining existing systems¹. This means that you may have an opportunity to free up budget for new projects if you can use these existing resources more efficiently, carefully matching your utilization of servers, PCs, routers, and so on with demand and service level requirements. In addition, using IT resources more efficiently allows you to save on energy, building space and human resources, freeing funds that can be used elsewhere to enhance ongoing developments.

¹ cioupdate.com, New Initiatives Spending Versus Keeping the Lights On, January 2008

Most agencies are already working to achieve greater efficiency, including:

NETCOM/TNOSCs² The U.S. Army is putting in place a strategy that is managed by the U.S. Army Network Enterprise Technology Command/9th Army Signal Command (NETCOM/9th ASC). The objective is to transform the Army into a network-centric, knowledge-based force to improve the decision-making capabilities of tactical commanders and business stewards. NETCOM is concentrating on enhancing the capabilities and efficiencies of the Army's information technology (IT) infrastructure and providing troops with ubiquitous access to information resources. In NETCOM's Theater Network Operations Security Centers (TNOSCs), which monitor and track status of communications links for the Army, IT is working to improve efficiency of the Army's networks by creating common infrastructure monitoring and performance data capabilities. The goal is to provide standard service levels throughout the Army enterprise and to standardize and centralize "infostructure" operations, resulting overall in more effective service and reduced total cost of ownership.

NASA³ The National Aeronautics and Space Administration (NASA) has long worked to increase efficiency and effectiveness of its IT resources by consolidating mainframes and networks. Over the past five years, NASA has furthered integration and streamlining by moving from departmental IT solutions to NASA-wide solutions aligned with the agency's strategic direction and Federal initiatives. The goal of these new IT initiatives is to provide more efficient methods to solve agency problems rather than merely automate existing processes.

FMS⁴ The Financial Management Service (FMS) provides central payment services to Federal Program Agencies, operates the Federal Government's collections and deposit systems, provides government-wide accounting and reporting services and manages the collection of delinquent debt. It accomplishes this by providing financial services, information, advice and assistance to its customers who consist of taxpayers, the Department of the Treasury, Government policy makers and Congress. FMS is on the technology forefront in its use of automated systems. The IT team ensures the efficiency and the integrity of the IT systems and services that FMS provides.

SECTION 2: OPPORTUNITY

CA Solutions Enhance IT Efficiency and Free Resources

CA offers a wide range of solutions that enable you to use your existing servers, desktop systems, backup systems and other elements of your IT infrastructure more efficiently to reduce operating expenses and energy costs.

Improving Server Efficiency

CA helps you improve the efficiency of your virtual server systems and your physical servers in your data center with the CA Advanced System Management and CA Data Center Automation Manager solutions.

² CIO US Army, ARMY NETOPS CONOPS VERSION 1.0

³ NASA, Focusing on Results Through the President's Management Agenda, 2004
NASA HQ IC&T Division, Information Technology Tactical Plan — FY2009, FY2010 and FY2011, Oct. 2008

⁴ <http://fms.treas.gov>

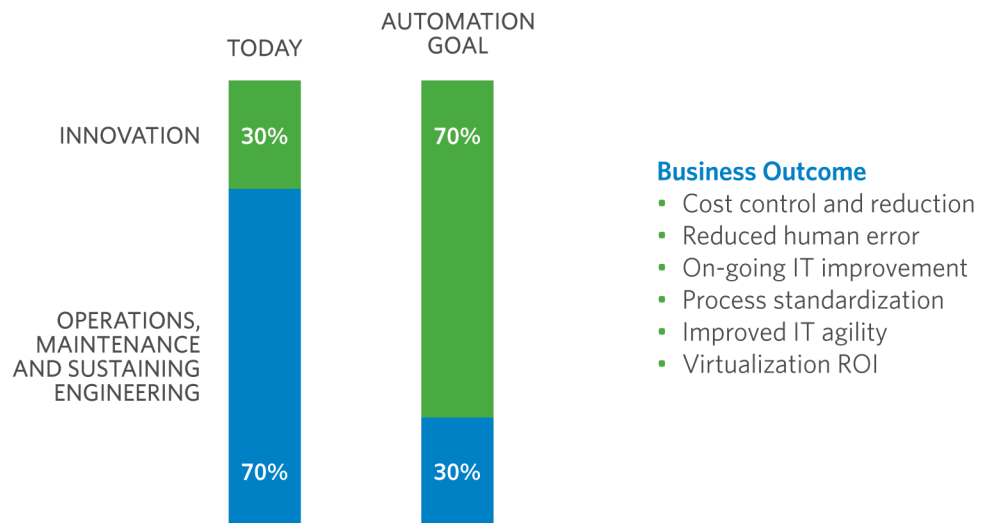
CA ADVANCED SYSTEM MANAGEMENT

Virtualization improves the utilization of the servers used in consolidated data centers by dynamically allocating server resources to meet changing business demands. However, virtualization is complex, and administrators are often plagued by poor visibility into and control over virtual server operations. CA Advanced System Management centrally manages multivendor virtual server and cluster technologies. The solution offers dynamic resource brokering to improve efficiency of system resources, advanced discovery and virtualization to map virtual to physical resources, comprehensive real-time performance metrics, and historical analysis for capacity planning and powerful reporting. With these capabilities, CA Advanced System Management helps your organization adapt to changing business priorities in real time by allocating and reallocating the resources of virtual systems based on business policies to help use IT resources as efficiently as possible.

FIGURE A

Automation Delivers Agility, Innovation, and Cost Reduction

ALLOCATION OF IT BUDGET



CA DATA CENTER AUTOMATION MANAGER

CA Data Center Automation Manager provides system administrators with a graphical user interface (GUI) that works in conjunction with other CA solutions to dynamically provision and manage IT resources. To illustrate: administrators can use the GUI from CA Data Center Automation Manager to orchestrate automated virtual systems management tasks, which are performed by CA Advanced System Management. Similarly, administrators can use the same GUI to automate the management of physical servers using CA IT Asset Manager.

Built upon a Services-oriented Architecture, CA Data Center Automation Manager creates an agile infrastructure, optimizing resource utilization and verifying the availability of business services. CA Data Center Automation Manager conducts automated infrastructure analysis, detects changes and drives remediation based on policy, helping verify standardization and compliance. It also improves operational efficiency by validating the performance of workload automation platforms, virtual and dynamic environments and clustered services. With CA Data Center Automation Manager, your organization can create an adaptive real-time data center, controlling costs and enhancing business continuity.

By enabling comprehensive IT asset resource planning and efficient automation, CA Data Center Automation Manager also helps server resources do more computing with less total power consumption and less physical space, further reducing costs.

Achieving High Availability for Consolidated Data Centers

The more your agency consolidates data centers and the more users that each center supports, the more critical it is for servers within these data centers to operate with high availability. CA XOssoft™ furnishes high availability for your mission-critical database and messaging applications. It supports Microsoft Exchange, SQL Server, SharePoint, IIS, Oracle and Blackberry servers and more. Using real-time data replication and synchronization between your production servers and replica servers (whether local or remote) and automated failover, CA XOssoft keeps your users highly productive as they keep working even during system crashes, unplanned outages and natural disasters.

CA XOssoft also offers manual failover so IT staff can schedule temporary failover to the replica environment for production server updates and upgrades. Built-in automated testing keeps your replica servers and applications ready at a moment's notice with little to no IT support, helping to keep productivity high and reduce the risk of any system outages. CA XOssoft also is designed to provide continuous data protection (CDP) with Rewind technology that helps administrators quickly and easily roll back to an earlier point in time to promptly recover from data loss or system failure.

Virtualized servers are an important part of IT infrastructures today and require special attention to verify they are protected. If you're using traditional backup software, you may not have enough processing power, memory or I/O to back up multiple virtual and physical machines within your available backup window. CA ARCserve® Backup was designed for virtual and physical servers and can improve the performance and reliability of your data backup. In addition, CA XOssoft™ Replication is designed to enable migration from physical to virtual servers without significant downtime, helping you to further reduce costs and simplify server virtualization.

Both of these solutions include built-in reporting capabilities that help you understand how your storage capacity is deployed so you can proactively manage storage to make it more efficient.

Inventorizing and Managing Hardware and Software Assets

You need to understand what software and hardware you have if you wish to utilize these resources most effectively. CA IT Asset Management solutions allow you to automatically inventory and manage the components of your IT infrastructure. With this information, you can unify IT assets to better support mission objectives and more easily manage costs and spending across IT resources and service consumption.

CA IT CLIENT MANAGER

CA IT Client Manager automatically discovers hardware and software inventory. It also monitors software usage and furnishes extensive cross-platform reporting to help you properly manage your infrastructure. CA IT Client Manager helps drive the strategic planning efforts of your IT executives by converting raw asset data into actionable intelligence that they can leverage to make well informed business decisions and identify opportunities for additional efficiencies and cost savings. CA IT Client Manager drives informed IT decision making based on key performance indicators and executive level views of critical client device information. Through easy, centralized access to up-to-date client device information, you can more proactively identify cost cutting opportunities, avoid redundant and unnecessary spending and make cost sensitive decisions that support business operations.

CA COHESION® APPLICATION CONFIGURATION MANAGER

CA Cohesion is used as the discovery module of CA Configuration Management Database (CMDB) and CA Data Center Automation Manager. It enables you to discover servers on managed network segments and build a comprehensive application view, detect the slightest changes in application components, including operating systems, and create, run and audit policies governing performance, security, regulatory and standards compliance. CA Cohesion also discovers relationships between configuration items and loads this data into the CA Configuration Management Database (CA CMDB). With all this data, you can manage entire software stacks and applications distributed across multiple servers. You can also discover how assets are related to each other and what services are used to deliver them. This helps you determine whether there is any redundancy or servers that are not being utilized effectively. In this way you can consolidate and help optimize the use of your infrastructure.

Planning Capacity and Improving Efficiency of Applications and Infrastructure

For capacity planning and resource optimization of your network infrastructure and the applications that execute across the network, CA offers the CA eHealth, CA eHealth for Voice and CA Wily Application Performance Management solutions.

CA eHEALTH

CA eHealth enables you to proactively manage your networks. It also provides reports on network utilization that enhance your use of network resources while helping to verify that you have adequate capacity to meet growth requirements.

CA WILY APPLICATION PERFORMANCE MANAGEMENT (APM)

CA Application Performance Management allows you to monitor your end-to-end applications in situ, as they run. CA APM monitors web services transactions 24x7 in real time, providing visibility into all components of each monitored application. It shows the time spent within each of the components allowing performance problems, service degradations and other failures to be easily and quickly diagnosed. IT support staff from across your organization can clearly see where the application is spending its time and what is causing performance bottlenecks. This eliminates finger-pointing and significantly lowers Mean Time to Repair (MTTR). By using the CA Wily APM, you can expect MTTR times to decrease substantially. The result is higher productivity and greater operational efficiency. It also helps you proactively plan capacity of your underlying application infrastructure and add resources only where necessary.

CA NETWORK & VOICE MANAGEMENT AND CA eHEALTH® FOR VOICE

Another way to improve the efficiency of your network infrastructure is to combine voice and data traffic using Voice over IP (VOIP). This has become commonplace over the past few years and will likely increase in value as unified communications applications gain ground. Unified communications brings the concept of presence into the work place, allowing users to be contacted in a variety of ways, such as IM, telephone, voicemail and email, depending on their availability and location. CA Network & Voice Management (CA NVM) and CA eHealth for Voice help improve the efficiency of the network, reduce the need for support and maintain appropriate quality levels.

Optimizing Energy Usage

“Data centers typically consume 15 times more energy per square foot than a typical office building and, in some cases, may be 100 times more energy intensive”⁵. CA solutions can help you manage energy utilization. Using environmental sensors to monitor temperature, humidity, motion, airflow and more, your agency can collect data about energy utilization in your data centers. By integrating data from the sensors into the CA infrastructure management and data center automation solutions, you can create dashboards and reports that detail the location of hot spots. These can also indicate which servers are drawing the most energy and generating the most heat, specify how power usage maps to server capacity usage and more. With this information, you can better control energy expenditures and reduce your carbon footprint.

⁵ Alliance to Save Energy, January 2007

SECTION 3: BENEFITS

Do More with the Same Resources by Improving Efficiency

As you address increasing demands to consolidate operations, share resources and data and provide new services to citizens, businesses and employees, CA solutions help you achieve service levels in a cost-effective manner. With greater efficiency, you can stretch your budget to add strategic value in support of your agency's mission. Specifically, you can benefit as follows:

Remove Unnecessary Costs

CA solutions can help your agency improve efficiency by making better use of your existing server, desktop, communications infrastructure and other IT investments, reducing unnecessary costs. Additionally, by using fewer IT resources, you can reduce your energy consumption, further lowering your costs and your carbon footprint.

Do More with Existing Resources

Using CA IT management solutions, you can consolidate and automate the management of your servers, end-to-end applications, and network and voice systems for your consolidated data centers. As a result, you can use your IT infrastructure more efficiently and free up human resources, your energy budget and even office space. By reducing costs of maintaining existing systems, you can stretch your existing budget to accommodate new demands.

Improve IT Maturity and Operate at Higher Levels Within the Agency

Automated processes, such as those provided by CA management solutions, can create repeatable practices within your IT organization, eliminating the need for your staff to begin again each time they perform an IT management operation. By following standard, automated best practices, your IT organization becomes more predictable, delivering projects on time and maintaining service levels and quality to add more strategic value to support your agency's mission. When your agency trusts your IT organization's performance, you are better able to become involved with strategic decision making and to justify additional budget requirements.

SECTION 4: CONCLUSIONS

Agencies continue to strive to meet OMB requirements for greater consolidation, resource and data sharing, and providing more services to citizens. Yet, funding for these new initiatives is often lacking or must somehow be found within the existing budget. As a result, they are looking for ways to reduce costs by using all of their existing resources more efficiently and effectively. CA provides a wide range of solutions that allow you to proactively plan capacity and enhance the utilization of your IT applications, servers and voice and data communications infrastructure. By offering services in an efficient, reliable and cost-effective manner, your agency can more easily free up scarce resources. This will enable you to more effectively meet strategic objectives and OMB requirements and achieve these benefits:

- Higher productivity and efficiency across your agency
- Lower costs to operate, support and maintain your IT infrastructure
- Increased ability to support new initiatives
- Greater management recognition and respect for IT as processes mature and service quality improves allowing IT to become a true business partner

SECTION 5: ABOUT THE AUTHOR

William F. Clark is the vice president of technical sales and public sector chief technology officer for CA, Inc. In his role as public sector CTO, Mr. Clark works with CA customer and partner executives to help ensure that business and IT objectives are realized through their investments in CA solutions. Mr. Clark manages an enterprise architect team, a proposal team and a business development team. These teams help drive public sector IT investments in CA products and services. He is responsible for representing the certification requirements of the public sector to the CA product business units.

Mr. Clark has over 30 years of IT experience working with government and business customers. He has hands-on experience and management experience across multiple business systems, IT platforms and architectures used to deliver services. He focuses on the use of technology to enable high performing business processes and critical IT processes within large agencies and enterprises.

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