Citrix Public Sector:
In Step with State CIOs

Virtualization solutions to address state government’s technology trends and challenges
Overview

In early 2010, the National Association of State Chief Information Officers (NASCIO) surveyed 40 state and territorial chief information officers (CIOs) on technology issues running the gamut from information technology (IT) budgets to emerging technologies in state government. This survey, “The 2010 state CIO survey: Perspectives and trends from state government IT leaders,” provides valuable insight into the needs and concerns of state CIOs.

For government desktops, laptops, smartphones and even the latest tablets, virtualization solutions from Citrix Systems, Inc., give state CIOs the power to address many of the pressing concerns and blossoming opportunities identified in this NASCIO survey. Citrix solutions enable government workers—including field workers, mobile public safety officials, public works employees and even government contractors at any location—by providing secure, role-based access to the applications and information vital to the delivery of basic and critical services.

Shrinking budgets, expanding technology needs

With overall budgets trending down, expectations are for state government’s IT budgets to do the same. Two-thirds of state government CIOs reported in the 2010 NASCIO survey that they expected lower IT budgets in 2011, and for the trend to continue through 2013.

As one CIO stated in the survey, “If there is a silver lining to the economic clouds, it has been the necessity to economize and improve performance.” Citrix believes that this is where virtualization solutions can make a tremendous difference for state government.

Desktop virtualization from Citrix enables fast access to data and applications for employees from just about anywhere, without expensive hardware replacement and without the need to spend valuable time touching every end device for patches, upgrades and new software installations. Desktops and laptops last years longer than with the traditional computing model, and the IT team can handle most desktop maintenance—software installations, patches and upgrades—from a central location. This reduction of hard costs and personnel resources makes desktop virtualization an ideal solution for state CIOs faced with growing technology needs and flat—or shrinking—technology budgets.

Citrix® XenDesktop® is a powerful desktop virtualization solution that enables fully personalized desktops for each user with all of the security and simplicity of centralized management. With Citrix XenDesktop, state governments can:

- Leverage Citrix® XenApp™ functionality to deliver on-demand applications to any user, anywhere, as a part of the overall desktop management strategy.
- Dramatically simplify desktop management with the ability to manage and update the OS and applications one time, from one location, with no need to physically touch every end device.
- Improve data security by eliminating the need for data to reside on end user devices.
- Create preconfigured policies to determine the appropriate level of access to grant to users based on role, location, network and device.
- Enable self-service user capabilities for adding, updating and removing applications.
- Deliver every type of virtual desktop, hosted or local, physical or virtual—each specifically tailored to meet the performance, security, and flexibility requirements of each individual user.
- Provide a consistent, high-definition user experience no matter the end device or connection speed.

Next up for government: The move to the cloud

When the NASCIO survey presented state government CIOs with cloud computing, social media and green technology, they selected cloud computing as the highest-value emerging technology.

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i The 2010 state CIO survey: Perspectives and trends from state government IT leaders, NASCIO, August 2010
According to the survey, some CIOs say that “what makes cloud computing different today is the maturity of the new cloud technology, so that this approach now offers fast response time, access to many applications and quick, agile solutions at a lower cost than many alternatives for on-demand services.”

Roughly one-half of the survey’s state government CIOs indicated that they are studying cloud computing but have not yet taken any action. About 20 percent of state government CIOs reported that they are currently involved in an active cloud computing project.

IT experts in state government already recognize the potential of the cloud in terms of agility and cost reductions. Citrix Cloud Solutions are designed to give government a complete set of service delivery infrastructure building blocks for hosting, managing, and delivering cloud-based computing services.

Citrix OpenCloud solutions offer an open, pragmatic approach to cloud computing. Seven turnkey solutions, focused on practical cloud use cases and delivered by proven cloud providers, let government immediately take advantage of cloud economics to address urgent IT needs and leverage existing investments, including third-party virtualization technologies and tools, to migrate application workloads to the cloud without having to overhaul existing applications or their underlying infrastructure. Citrix OpenCloud provides government with:

- On-Demand Apps: Deliver applications to any user from the cloud.
- On-Demand Demos: Dynamically create customer trial environments.
- On-Demand Desktops: Deliver complete Windows® desktops to users from the cloud.
- Compliance: Use the cloud to meet compliance mandates.
- Onboarding: Seamlessly migrate applications and workloads to the cloud.
- Disaster Recovery: Leverage the cloud for secure and reliable disaster recovery.
- Dev and Test: Use the cloud as a turnkey solution for development and test workloads.

**State Government and Green IT**

According to the 2010 NASCIO survey, nearly half of all state governments have mandated green IT policies, with more in the works as states demonstrate a keen sense of green IT responsibility. For example, an executive order from the governor of California requires state agencies to “reduce grid-based energy purchases for state-owned buildings by 20 percent by 2015, through cost-effective efficiency measures and distributed generation technologies.” Other states are following in California’s footsteps, with more mandates to come in the months and years ahead.

Traditional desktops can draw a significant amount of power, even when in sleep or standby mode, with the more powerful machines consuming yet more energy. When scaled to hundreds or even thousands of users, government’s IT power bill really adds up.

The cradle-to-grave environmental impact of desktops and laptops poses yet another concern, especially when it comes to replacing and disposing of obsolete machines. Hazardous materials found in these devices, such as lead, cadmium and mercury, require special handling for disposal and can amount to as much as $200 per device in aggregate disposal costs. Standardizing machines that pose less of a toxic threat and promise a significantly longer life would be better—for both the agency and the environment.

Citrix XenApp and Citrix XenDesktop leverage virtualization to reduce the computing power needed on the desktop and to broaden government’s options when purchasing new client devices, such as new low-power alternatives. This has significant implications for both the type of device used and its longevity.

With Citrix XenApp application virtualization, applications run independent of the operating system, taking the actual computing device out of the equation. Applications are delivered, not
installed, sending only what’s needed for interaction with the application and diverting all the processing power back to the datacenter for optimal energy efficiency.

Citrix XenDesktop, alternatively, connects to a session-based device, such as a blade PC, making it easy to cycle remote desktops to make the most of available power at the branch office. Devices can also be automatically powered down when the office is closed. User desktop sessions still remain actively running on servers in the datacenter while devices use little or no power until office hours resume.

Via virtualization solutions from Citrix, less powerful machines, like thin clients, can be used to run new and even larger applications without harm to performance. Additionally, these machines enjoy a longer life—from the average two years for most devices to five or more—simply because they endure less impact and typically have no moving parts. Longer life means less equipment to purchase and dispose of, leading to less hardware waste, reduced disposal costs and a leaner, greener government agency.

The future of government IT

NASCIO states in the 2010 survey, “A search for lower costs will drive the agendas of many state CIOs for the next few years. With stronger authority and a diligent pursuit of higher value and greater efficiency across institutional boundaries, CIOs will enable IT to help set new standards of government performance.”

Citrix plans to be there every step of the way, with end-to-end virtualization solutions that will help state governments expand their IT capabilities and maximize limited financial and personnel resources.

About Citrix

Citrix Systems, Inc. (NASDAQ:CTXS) is a leading provider of virtual computing solutions that help companies deliver IT as an on-demand service. Founded in 1989, Citrix combines virtualization, networking, and cloud computing technologies into a full portfolio of products that enable virtual workstyles for users and virtual datacenters for IT. More than 230,000 organizations worldwide rely on Citrix to help them build simpler and more cost-effective IT environments. Citrix partners with over 10,000 companies in more than 100 countries. Annual revenue in 2009 was $1.61 billion.

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