



# Bring-Your-Own-Device Freedom

## Solutions for federal, state, and local governments

Increasingly, IT organizations in federal, state, and local agencies are embracing consumerization with the understanding that device flexibility is key to employee productivity. Over time, more agencies are engaging with the ability of employees to work from anywhere, on any device, and are successfully integrating bring-your-own-device (BYOD) programs into daily operations.

A main objective of the Digital Government Strategy, launched by the Obama administration in 2012, is for agencies to deliver and receive digital information and services anytime, anywhere, and on any device. The Telework Enhancement Act of 2010 establishes guidelines for federal employees to work outside of government offices.

Government agencies see mobility as a way to improve citizen services. BYOD strategies for government workers help improve efficiency and lower costs. A study published by Deloitte University Press predicted up to 45 percent improvement in productivity of government employees, such as caseworkers, who use mobile tools.\*

There is also growing consensus that allowing government workers to use personal mobile devices to access government agency resources translates to higher job satisfaction. At the same time, IT staff must guarantee that devices are configured and managed with information assurance controls to ensure ongoing data security regardless of where or how people access information.

As new generations of employees enter the workforce, the movement to working on the device of one's choice only becomes more pronounced. To empower these workers, Citrix offers a simple, secure solution to deliver self-service, on-demand data, apps, and desktops to any device. That solution, along with proven best practices, puts the full power of BYOD strategies to work for any government agency.

In providing these solutions for BYOD programs, Citrix understands that

- The crux of any BYOD initiative is to offer unlimited computing freedom. By embracing the trend of device consumerization, federal, state, and local governments will meet the preferences of their employees, offering them newfound productivity, mobility, flexibility, and an enhanced work-life balance.
- Sustainable BYOD programs need to be cost-effective. Agencies should do a cost-benefit analysis that considers both potential increases in employee productivity and potential cost shifts.
- New BYOD initiatives bring with them a wide range of security, policy, and IT challenges that agencies must acknowledge and solve over time.
- Drivers for instituting a BYOD program include cutting expenses, raising productivity, accommodating new members of the workforce, and improving user experience.

### **Complete BYOD strategy**

BYOD programs come in many forms, from the ad hoc use of personal devices to supplementing agency endpoints to replacing government-owned devices entirely. Regardless of the strategy, a complete, well-architected approach is essential for embracing a BYOD program without increasing security and efficiency risks. The lack of a structured approach to a BYOD program leaves

\*William D. Eggers and Joshua Jaffe, "Gov on the Go," Deloitte University Press (Feb. 18, 2013), <http://dupress.com/articles/gov-on-the-go/>.

agencies exposed to security gaps, compliance issues, and rising IT complexity. As a leader in flexible, mobile work-style solutions, backed by real-world experience and proven best practices, Citrix can help implement a simple, secure BYOD solution that

- Empowers workers to choose their own devices to improve productivity, collaboration, and mobility
- Protects sensitive information from loss and theft while addressing privacy, compliance, and risk management mandates
- Reduces costs and streamlines management through self-service provisioning and automated management and monitoring
- Simplifies IT administration by deploying apps once for use on any device

Citrix BYOD solutions that include Citrix Receiver, Citrix XenApp, Citrix XenDesktop, Citrix XenMobile, and Citrix ShareFile offer desktop and app virtualization, a unified enterprise app store, file sharing, and collaboration to make BYOD programs simple and secure for any government agency.

### Any user on any device, without compromised security

Citrix solutions provide agencies with a broad range of offerings for their BYOD programs:

- **Desktop and application virtualization:** IT teams can transform any application as well as complete desktops into an on-demand service available on any device. The solution lets government workers use any combination of desktop and application delivery approaches to support every type of user through a single point of control.
- **Self-service app store:** Staff can easily access any of their authorized apps—including Windows, web, and software as a service (SaaS) apps—on any device through a secure, consistent app store with a convenient single sign-on experience.
- **Follow-me data:** Workers can securely share files with anyone inside or outside their agency and sync files across all of their devices. IT staff can deploy comprehensive usage policies and remotely wipe data from devices so that confidential information is secure, even if a device is lost or stolen. Additionally, access control, auditing, and reporting help to prevent unauthorized or inappropriate file access.

### Considerations and best practices for government BYOD initiatives

While not every agency has a formal BYOD program in place, each one should develop policies for the use of personal devices at work. Such policies should address factors such as the following:

- **Eligibility:** Identify who can use personal devices for work and scenarios where it is inappropriate due to data security, worker type, or other factors.
- **Allowed devices:** Allow staff to use the devices that best meet their needs.
- **Service availability:** Think about the services and apps to be made available on personal devices and whether they differ by work groups, user types, device types, and networks utilized.
- **Rollout:** Provide guidance to help workers decide whether to participate in the BYOD program and which device to choose, as well as making them aware of the responsibilities that come with bringing their own devices, including how data can be accessed, used, and stored.
- **Cost sharing:** Consider providing a subsidy for BYOD and other services, especially in cases where the agency no longer provides the device.

- **Security:** Allow confidential business information to reside on an endpoint only in isolated, encrypted form and only when absolutely necessary. Multilayered security should include granular policy-based user authentication with tracking and monitoring for compliance; control over print capabilities and client-side storage; and mandated antivirus/antimalware software. Agencies should consider remote-wipe mechanisms.
- **Support and maintenance:** Spell out the type of incidents IT staff will support and the extent of this support. A loaner pool of devices allows uninterrupted productivity during service, especially when a personal device is used in place of an agency device. Consider providing key personnel with additional concierge-style support.

### Citrix alignment with government approaches to BYOD programs

Citrix solutions and products align well with federal, state, and local BYOD strategies.

#### Virtualization

Citrix virtualization solutions consolidate all data, applications, and desktops in the data center. Agency IT teams have the ability to transform any application as well as complete desktops into an on-demand service available on any device—using any combination of desktop and application delivery approaches. Remote access comes with minimal client-side processing, leaving no data at rest on the endpoint. This “screen-scrape” virtualization solution allows users to interact remotely with a full Windows desktop or application.

Federal, state, and local agencies can put into place a virtualization solution using a XenDesktop and XenApp virtualization architecture. This not only allows IT staff to shift to a thin/zero-client computing solution but also to leverage the same environment to enable BYOD mobility using Citrix Receiver. Citrix Receiver is an easy-to-install client software that provides access to XenDesktop and XenApp installations.

XenApp is the industry-leading solution for virtual application delivery, providing Windows and web apps to workers on any device, anywhere. XenDesktop, which provides virtualized desktops as an on-demand service, is ranked No. 1 in market share, with more than 1.5 million federal users and 120 million commercial users.

#### Containerization

Agencies can isolate their data into a secure “container” on the endpoint, which IT staff can manage separately from the personal components on the device. Citrix MDX (mobile device experience) technology enables the management, security, and control of web and native mobile applications and data. With MDX technology, agency apps and data reside in a secure container, completely separated from personal apps and data on the user’s mobile device. Within this container, federal, state, and local agencies can secure apps and data with comprehensive policy-based controls over the usage of the content, including prevention of mobile data loss and the ability to remotely lock, wipe, and encrypt apps and data.

XenMobile is a comprehensive solution to manage mobile devices, apps, and data. Agency users have single-click access to all of their mobile, SaaS, and Windows apps, including seamlessly integrated email, browser, data sharing, and support apps. IT teams gain control over mobile devices with full configuration, security, provisioning, and support capabilities.

### State and local success stories

- California Department of Justice uses XenMobile to give officers in the field access to criminal justice information anytime, anywhere, and on any device.
- City of High Point, North Carolina, uses Citrix desktop virtualization to keep employees productive and responsive anywhere, on any device—even during a disaster.
- Orange County Public Libraries in California uses XenDesktop to reduce capital expenses, administrative costs, and security risks.

### Federal success stories

- U.S. Navy uses a hosted virtual desktop solution from Citrix to deliver on-demand desktops, applications, and data to any user anywhere—securely and efficiently. Staff can bring their own devices into work and use them on the existing network, as well as work from home or anywhere else outside of the office.
- U.S. Defense Logistics Agency achieves agility through telework and BYOD strategies using Citrix solutions. Like the U.S. Navy, it too allows staff to use their own devices at work or work from home or outside the office.
- Pacific Northwest National Laboratory (PNNL) is one of 10 U.S. Department of Energy (DOE) national laboratories and is known globally as the most advanced environmental research lab in the world. PNNL chose Citrix XenMobile to simplify, standardize, and secure mobile access to its more than 4,300 researchers, scientists, and staff collaborating around the world. Tasks previously tied exclusively to the desktop can now be done anywhere, which greatly enhances productivity.

### Alcohol and Tobacco Tax and Trade Bureau success story

Alcohol and Tobacco Tax and Trade Bureau (TTB) developed an initiative to slash the expense, time, and effort required to refresh its desktop and laptop computers. TTB has a dispersed workforce, with 80 percent of its staff regularly teleworking. The desktop and laptop refresh carried a price tag of about \$2 million every few years and disturbed both worker and IT business alike for months on end. Over time, the bureau opted to centralize all client computing power and applications, user data, and user settings and allow access to TTB resources via thin-client computing devices.

In light of limited funding for virtual desktop implementation, TTB examined its existing hardware, software, and technical expertise to determine the path most likely to succeed and achieve the objectives of providing central access to all IT resources while realizing cost savings. With approximately 80 percent of its Windows servers and 20 percent of its Sun Solaris servers virtualized, the bureau was confident that a virtual desktop infrastructure could be built without the need for physical servers.

Due to TTB's extensive telework program, supporting remote workers with a robust remote access capability was of primary importance. The bureau further hoped to take advantage of its investment in Citrix licenses and the significant expertise that IT staff had gained with the Citrix product suite as they supported remote staff. TTB used Citrix Receiver because it allows the bureau to create thin-client devices from almost any device and power its BYOD computing initiatives.

Savings of \$1.2 million from the virtual desktop approach paid for the bureau's virtual desktop implementation—which cost approximately \$800,000. Presently, about 70 percent of TTB's users access its resources through thin devices provided by TTB as well as their own personal devices; any user configuration that works is allowed, giving staff unprecedented computing freedom.

The bureau's embracing of a virtual desktop strategy is especially timely considering the rate of change within the mobile device market. Because no data touches the user device during staff work, there is no need for a mobile device management (MDM) solution on a non-TTB device.

### Conclusion

Among federal, state, and local agencies, BYOD implementations can take many forms. Citrix solutions provide a flexible yet controlled framework to design and implement the right approach for any government enterprise.

For more information, visit [www.citrix.com/solutions/us-government](http://www.citrix.com/solutions/us-government) or register for an event at [www.citrix.com/events](http://www.citrix.com/events).

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#### About Citrix

Citrix (NASDAQ:CTXS) is leading the transition to software-defining the workplace, uniting virtualization, mobility management, networking and SaaS solutions to enable new ways for businesses and people to work better. Citrix solutions power business mobility through secure, mobile workspaces that provide people with instant access to apps, desktops, data and communications on any device, over any network and cloud. With annual revenue in 2014 of \$3.14 billion, Citrix solutions are in use at more than 400,000 organizations and by over 100 million users globally. For over 25 years, Citrix has been working with federal, state, and local government organizations to improve performance and efficiency. By transforming the mobile workplace with secure application and data delivery solutions, Citrix provides agencies and departments mobile secure access to government applications, desktops, data, and communications they need on any device, network, and cloud.

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