

Citrix XenApp: Single point of access, single point of control



Executive summary

You probably have a VPN solution in place, which likely serves as a vehicle for delivering remote access to the corporate network, but in this era of mobility admins must question if this is the right remote access solution for every employee. Traditional SSL VPN-based remote access is more robust and secure than its IPSEC predecessor, but both VPN solutions still enable sensitive data to leave the protection and security of the corporate network. As the workforce becomes more mobile with more devices, the risk of creating a VPN tunnel that enables every employee's remote device to become an extension of the corporate network makes it imperative to consider other options.

There is a better way. Used by 97 of the Global 100 and over 120 million users worldwide, Citrix XenApp provides secure, high-performance remote access to individualized Windows business applications that are centrally managed and secured in the datacenter. With XenApp, the corporate network remains secured as employees remotely interact with business applications without the application leaving the protection of the datacenter. XenApp can rapidly enable remote application access for new users on any device indifferent of operating system, form factor or speed of network connectivity. Remote access with XenApp reduces costs while improving security by providing a single point of access for users and single point of control for administrators.

Remote access application delivery

Organizations are becoming more agile as they respond to changing market requirements and ensure employee productivity in an ever-changing global economy. Mergers, acquisitions, divestments, partnerships and outsourcing have all put pressure on traditional remote access solutions. This type of work environment fluctuation means that business requirements, users, and end point devices are constantly changing. IT must be able to quickly provision or de-provision users and applications without having to work through multiple iterations of change requests or perform rigorous compatibility testing.

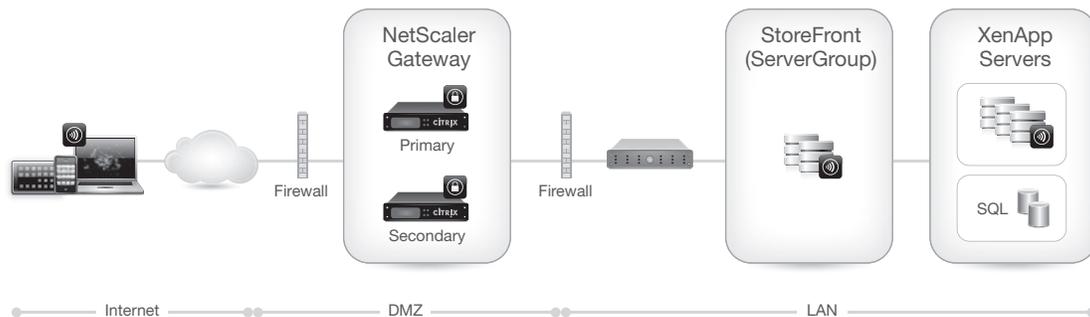
The volatility of workplace requirements isn't the only factor complicating a remote access strategy. A proliferation of consumer devices and the pervasiveness of broadband connectivity is enabling users to increasingly shift between work and personal time. Smartphones and tablets are joining laptops in briefcases, and users are demanding they be supported from virtually anywhere—home, restaurants, airport lounges, and business centers. The potential employee productivity gains associated with supporting these consumer devices is attracting increased attention for organizations.

In most cases the remote access solution is also considered a key element for maintaining business continuity whether it's extreme weather, transportation problems, family illness, or other common life events that prevent an employee from reaching the office. In the past only a handful of employees required remote access, but today almost every employee needs the ability to temporarily work from home or alternative locations.

As the workplace evolves, you may have been tempted to take the de facto VPN solution already in place for administrative remote access and simply extend that solution as the remote access option for all employees from any type of device, but balancing the security and compliance requirements of the modern mobile workforce with a traditional VPN might be more challenging than anticipated. Traditional VPN solutions require access to be open across the corporate perimeter thus extending the internal network to potentially insecure remote hosts. This results in multiple configuration points and a complex algorithm of security rules to enable remote access without truly reducing the risk of data loss.

Mobile devices, including laptops, can easily be stolen or lost. If sensitive data was stored on these devices the company could risk exposing financial information, competitive secrets or having their compliance certification revoked. Locally installed applications increase the attack footprint as tech savvy criminals look to take advantage of unpatched software vulnerabilities on unprotected devices. Distributing application software to client devices, supporting multiple host configurations, and increasing the number of access points elevates the cost of providing secure remote access and requires more resources to secure data, maintain a high quality user experience, and meet business expectations. These factors just draw light to some of the reasons why providing a centralized, secure remote access solution with XenApp is imperative.

The XenApp remote access solution consists of Citrix Receiver, NetScaler Gateway, Citrix StoreFront and XenApp. The illustration below provides a visual representation of the components and the line of communication between the endpoint and the desktop.



- **Citrix Receiver.** Citrix Receiver is a universal thin client that runs on virtually any device operating platform, including Windows, Mac, Linux, iOS, and Android. This is the one client users need to access corporate applications from any device.
- **NetScaler Gateway.** NetScaler Gateway is a secure desktop, application, and data access solution that affords administrators granular control while empowering users with remote access from anywhere. IT administrators gain a single point of management for controlling access and limiting actions within sessions based on user identity and configuration of the endpoint device. This results in better application security, data protection, and compliance management.

- **StoreFront.** Citrix StoreFront provides self-service subscription to applications via an enterprise app store giving users convenient access to all the applications they need while you remain in control. Access via StoreFront takes place via Citrix Receiver, ensuring a consistent interface and enhanced user experience.
- **XenApp.** XenApp is a flexible, on-demand application and desktop delivery platform that can dynamically select the best method to deliver application and desktop access based on the user, device, and network proximity. XenApp is based on Microsoft Remote Desktop Session Host (RDSH) technology, where multiple user sessions share the applications and resources of a single Windows Server instance.

Citrix XenApp

Citrix XenApp empowers users with on-demand self-service to business applications. It is an enterprise-class application delivery solution that enables any Windows® application to be virtualized, centralized, and managed in the datacenter and instantly delivered as a service to users anywhere on any device. Virtual application delivery with XenApp enables organizations to streamline management efforts by delivering applications from the datacenter—thereby reducing complexity and lowering operational costs. XenApp has been the industry standard for secure remote access to business applications based on the following key criteria:

Enterprise-class scalability and single instance management

XenApp centralizes applications in the datacenter making it easier to deliver them to any user anywhere, and scales on-demand to meet ever-changing business needs. A single XenApp server, physical or virtual, can support numerous user sessions and is optimized to intelligently allocate computing resources across multiple sessions. This type of scalability allows IT to manage a select number of XenApp servers to deliver applications to thousands to users making it optimal from both a management and cost perspective.

XenApp also eliminates the need to install or manage applications on distributed endpoint devices. Through the XenApp centralized architecture IT admins can patch, update, and test applications once in the datacenter and deliver them on-demand to users. Centralization streamlines management by enabling IT to deliver real-time updates without the need to perform extensive validation and compatibility testing. XenApp decreases the costs of post-deployment support by reducing the operational efforts required for patches and upgrades. This simplifies management, avoids application conflicts, and makes it easy to provide real-time updates.

Citrix has been perfecting XenApp scalability for over 20 years making it highly optimized for multi-user performance. XenApp also includes proactive application performance monitoring that automatically alerts admins when performance thresholds have been reached, providing IT support staff the tools and information needed to pinpoint and quickly respond to any issues, and proactively manage performance bottlenecks.

Self-service application delivery

XenApp with Citrix Receiver provides users instant and secure access to their corporate applications from any client operating system or device—PCs, laptops, Macs, tablets, thin clients, and even smartphones, such as the iPhone, Windows

Mobile, and Android. Any employee, local or remote, can simply download Citrix Receiver to their personal, mobile or corporate-issued device to have instant access to business critical applications. This simplifies the on-boarding process for new employees while also allowing IT the ability to immediately terminate application access for any user.

The self-service experience is further enhanced with the integration of StoreFront. Receiver on the endpoint communicates with StoreFront as the central access point to provide a unified application access experience from any device. StoreFront brings personalization to your remote access solution by allowing each employee to have a personalized list of applications, desktops and data based on their individual preferences, enabling XenApp remote access to fit the needs of every user.

High definition user experience

The centralized architecture of XenApp provides a flexible, on-demand application delivery system that dynamically selects the best method to deliver applications based on the user, application, and network. Applications are accessed using Citrix Receiver via Citrix HDX™ technology, affording users with a high definition application access experience.

Citrix HDX technology increases application performance by providing fast LAN-like speeds with advanced graphic and multimedia performance regardless of user location or the capabilities of the endpoint device. HDX can automatically assess the capabilities of the endpoint to leverage the local processing and multimedia capabilities when available. In this way, graphically intense applications, such as video and 3D graphics, are delivered with the best-possible user experience on any type of device.

Secure-by-design

With its centralized architecture, XenApp provides an inherently secure approach for delivering remote access to applications. Applications and data remain in the datacenter while only screen updates, mouse clicks, and keystrokes are transmitted over the network. Granular policies enable you to control different levels of application access, including tasks such as printing and clipboard functionality for specific applications and user groups. By varying access policies based on user, device, and location, security settings can be adjusted on a per-session basis to meet specific security and compliance requirements while protecting valuable corporate information.

Similar to an SSL VPN, XenApp remote application access limits the enterprise firewall configurations to permit access to a small number of ports and protocols, but unlike a VPN the corporate network is not extended to mobile devices that can be easily lost, stolen or comprised. With the integration of NetScaler Gateway, all XenApp communication is securely encrypted and monitored between the endpoint device and the application located in the datacenter. While NetScaler Gateway does offer a full SSL VPN option, its ICA Proxy functionality enables the encryption of all XenApp traffic without establishing a full VPN tunnel. The ICA Proxy leverages the hardened NetScaler Gateway appliance in the DMZ to encrypt user commands, such as keystrokes and mouse clicks, as they are transmitted back to the datacenter

where the application is actually running. NetScaler Gateway also integrates with StoreFront to seamlessly and securely encrypt the user authentication process thereby allowing the user to authenticate once for all application access. By using the ICA Proxy instead of a full VPN, Citrix Receiver is the only client required on the endpoint device making it an easy and secure access strategy for mobile devices. This level of tight encryption paired with the granular policy-based control makes the inherit security properties of XenApp a popular remote access solution for some of the most heavily regulated industries in the world including government agencies, healthcare, and financial verticals.

Single point of access, single point of control

With demand for remote access connectivity at an all-time high, organizations are seeking alternatives that exhibit greater security and flexibility than traditional VPN-based remote access offerings. IT departments need smarter solutions that provide shorter lead times to rapidly enable new users, applications, and devices so users can work effectively—whether at home, in the office, or from any location around the world.

XenApp sets the industry standard for remote access. It provides a user-centric secure remote access solution that centrally manages applications in the datacenter and delivers them instantly to users anywhere, using any device over even the most challenging network connections. XenApp reduces IT administrative operations and costs while simultaneously improving security and connectivity by providing users with a single point of access and administrators with a single point of control.

For more information about Citrix remote access solutions, please visit www.citrix.com.

Additional resources

- Citrix XenDesktop
- Citrix XenApp
- Citrix NetScaler Gateway
- Citrix HDX technology



Corporate Headquarters
Fort Lauderdale, FL, USA

Silicon Valley Headquarters
Santa Clara, CA, USA

EMEA Headquarters
Schaffhausen, Switzerland

India Development Center
Bangalore, India

Online Division Headquarters
Santa Barbara, CA, USA

Pacific Headquarters
Hong Kong, China

Latin America Headquarters
Coral Gables, FL, USA

UK Development Center
Chalfont, United Kingdom

About Citrix

Citrix (NASDAQ:CTXS) is the cloud computing company that enables mobile workstyles—empowering people to work and collaborate from anywhere, accessing apps and data on any of the latest devices, as easily as they would in their own office—simply and securely. Citrix cloud computing solutions help IT and service providers build both private and public clouds—leveraging virtualization and networking technologies to deliver high-performance, elastic and cost-effective services for mobile workstyles. With market-leading solutions for mobility, desktop virtualization, cloud networking, cloud platforms, collaboration and data sharing, Citrix helps organizations of all sizes achieve the kind of speed and agility necessary to succeed in an increasingly mobile and dynamic world. Citrix products are in use at more than 260,000 organizations and by over 100 million users globally. Annual revenue in 2012 was \$2.59 billion. Learn more at www.citrix.com.

©2013 Citrix Systems, Inc. All rights reserved. Citrix®, XenDesktop®, XenApp®, Citrix Receiver™, ICA®, Citrix HDX™ and NetScaler® are trademarks of Citrix Systems, Inc., or a subsidiary thereof, and are or may be registered in the U.S. Patent and Trademark Office and other countries. All other trademarks are the property of their respective owners.