



Pointsharp and Citrix Workspace

Flexible and customizable enterprise-class multi-factor authentication

Pointsharp helps protect the Citrix Workspace as a part of the Citrix Secure Digital Perimeter. Supporting both on-premises and cloud environments, Pointsharp and Citrix help secure the organizations vital digital resources while giving users a seamless experience and a productive environment. Designed for larger and more complex enterprise environments, unique Pointsharp App DNA technology verifies the application in conjunction with both the user and the device.

In an increasingly challenging security environment, multi-factor authentication is now essential to protect organizations of all sizes. Smaller organizations with relatively simple application needs may be able to utilize multi-factor authentication provided by a primary cloud vendor (e.g., Microsoft Office 365, Salesforce.com). Larger enterprise organizations, however, typically have more challenging and unique needs and use cases that require a more comprehensive approach.

Citrix Workspace

Only Citrix offers the most complete and integrated workspace to enable people to securely access their apps, desktops, and data from anywhere. Rely on Windows app and desktop delivery from XenApp® and XenDesktop®, device security from XenMobile®, secure file sync and sharing with ShareFile®, and network security with NetScaler®. Only a Citrix Workspace offers you complete choice of device, cloud and network, streamlined for IT control and simple, secure access for users.

With a focus on both on-premises and cloud environments, the Pointsharp and Citrix solution brings simplicity and unification to the login process. Pointsharp is different than other multifactor authentication solutions because it provides an authentication proxy in addition to an authentication server. Along with the sophisticated Pointsharp Login App and user, admin, and app portals, this technology approach enables support for a dramatically wide range of enterprise scenarios where secure login is required. Pointsharp helps Citrix implement a secure digital perimeter around Citrix Workspace, letting organizations increase their security and compliance with regulations like the General Data Protection Regulation (GDPR).

Pointsharp—authenticate the user, the device, and the application

Large enterprise organizations typically possess highly varied and complex hybrid application landscapes that combine on-premises infrastructure with increasingly virtualized, cloud-based, and Software as a Service (SaaS) applications. These complex enterprise-class environments have often lead to even more complex and fragmented authentication schemes. Tracking identity across multiple on-premises and cloud platforms can quickly become daunting, both for users and administrators.

In contrast, Pointsharp and Citrix technology is designed to make authentication easy to use, administer, and monitor. In securing the enterprise, organizations need to be able to change applications independently of authentication solution, and they need to be able to change and adapt their authentication solution based on their own dynamic needs. Most don't want to lock themselves into a single application vendor but they also need to avoid fragmented approaches that create productivity challenges for users, complexity for administrators, and new security holes for hackers to exploit.

Pointsharp Login App, one-time password, and User Portal

In the past, a remote or mobile user might only need to log into a virtual private network (VPN) once in the course of the day. Now users of all kinds need to authenticate (and re-authenticate) constantly with a host of different applications that may be either on-premises or in the cloud. The Pointsharp Login App lets organizations deliver simplicity and a seamless experience to streamline the authentication process.

More than multi-factor authentication, the Pointsharp Login App offers a wealth of functionality desired by large enterprise organizations, including:

- **Branding.** The flexible platform allows customization for adding corporate logos and colors to the Pointsharp Login App so that it looks and feels like in-house infrastructure.
- **Support.** The Login App helps users perform tasks such as self-service password resets while also providing information for connecting to helpdesks for support.
- **Push notifications.** Customizable push notifications allow organization-specific messaging to users' devices through the Login App.
- **Biometrics.** The Pointsharp Login App supports biometric authentication (as supported by mobile platforms) and allows the user to log in using fingerprints, iris, and facial recognition as supported by the individual device.
- **Smartwatch support.** Users can use a smartwatch to confirm logins in addition to other smart devices.

The Pointsharp Login App (Figure 1) also supports multiple authenticator profiles to generate one-time passwords (OTP). Multiple two-factor authentication methods with OTP tokens are included and supported by Pointsharp. Tokens can be deployed by the User Portal or automated via Active Directory. Supported authentication methods include:

- Pointsharp software token / Login App
- Short Message Service (SMS) one time password (SMS OTP)
- Pointsharp hardware token
- Google Authenticator
- Microsoft Authenticator
- Third-party OATH tokens



Figure 1. Pointsharp Login App

Pointsharp portals and administrative tools

Effective Identity and Access Management solutions must simplify the process for users and administrators alike. Users need ways to manage their own security profiles. Administrators need to understand how their resources are being accessed, and by whom. Pointsharp provides powerful user and portals and administrative tools, including:

- **Pointsharp User Portal.** The user portal offers an easy-to-use self-service mechanism that simplifies the on-boarding process and allows users to manage their passwords, tokens, and apps. The portal facilitates on-boarding a large volume of users using SMS with a OTP to authenticate the user for the first time. Token and app management provides support for daily self-service management tasks like removing or adding new tokens, or registering new mobile apps. Password management includes management for Microsoft Active Directory or Pointsharp passwords.
- **Pointsharp Admin Portal.** The Admin Portal provides an easy-to-use interface. Administrators can perform a wide variety of tasks, including managing user tokens and devices, enabling and disabling users, and auditing user activity.
- **Pointsharp Dashboard.** The PointSharp Dashboard lets administrators visualize in real time how user logins are occurring, and what applications they are accessing. The Pointsharp Dashboard shows both global real-time data as well as detailed information on individual users and devices. Detailed auditing can be performed by a single click on any specific user.

Pointsharp integration with Citrix Workspace

Pointsharp is tightly integrated with Citrix Workspace using NetScaler Unified Gateway for single sign-on (SSO). Pointsharp provides software that runs on Windows Server, with the choice of deploying on-premises or in the cloud. Illustrated in Figure 2, components of the solution include:

- The **Pointsharp ID Authentication Server** integrates with NetScaler via the Remote Authentication Dial-in User Service (RADIUS) protocol and Active Directory Federation Services (ADFS). The authentication server can read users from Microsoft Active Directory or Lightweight Directory Access Protocol (LDAP) v3.
- **Pointsharp Gateway** provides contextual authentication acting as the authentication proxy for the Pointsharp Login App. The gateway works in tandem with NetScaler, with NetScaler operating on the network layer with Pointsharp Gateway operating on the application layer. As a part of Pointsharp Gateway, Pointsharp App DNA provides a unique application signature. The gateway processes ActiveSync protocol to extract unique application-specific information as a part of the authentication process—helping to block spoofing attempts.
- **Pointsharp Login Modules** are credential providers for Windows Server, Remote Desktop, and virtual desktop infrastructure (VDI) solutions.

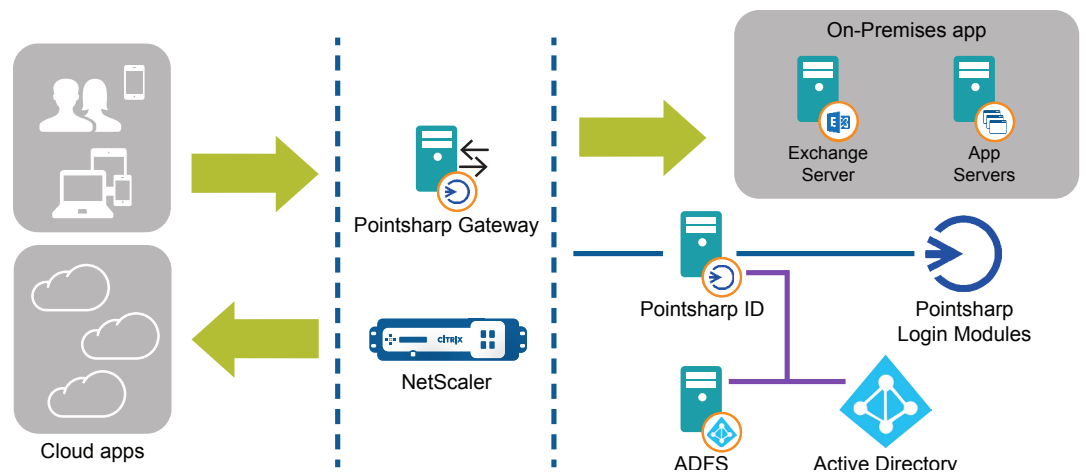


Figure 2. Pointsharp and Citrix integration architectural overview

A Secure Digital Perimeter for Citrix Workspace

Beyond usernames and passwords, administrators need to validate the user's identity and provide fine-granularity access to exactly the applications and data required. At the same time, enterprise environment is changing rapidly, creating new security challenges for IT, including:

- Cloud and application sprawl
- Distributed work styles
- Non-sanctioned storage
- Multiple devices (bring your own device (BYOD) or company-provided)
- IT complexity
- Motivated/malicious hackers
- Vast attack surfaces

Deploying a patchwork of security point solutions actually only complicates the problem. Separately managing authentication, single sign-on, endpoint access, and password management can create additional security vulnerabilities. In fact, many businesses now believe the complexity of their organizational structures and IT infrastructure is putting their companies at even greater risk of security breaches. Meanwhile, users are left to grapple with a less productive environment.

Citrix Workspace

Only Citrix offers the most complete and integrated workspace to enable users to securely access their apps, desktops, and data from anywhere.

- **App and desktop delivery (XenApp / XenDesktop).** Citrix Workspace features XenApp and XenDesktop—the industry’s leading solutions for application and desktop delivery, with over 100 million users worldwide. Citrix Workspace enables secure, remote access to Windows applications and desktops as well as Linux, web and SaaS applications from any device, over any network.
- **Enterprise mobility management (device security from XenMobile).** Using XenMobile technology, Citrix Workspace delivers full access to mobile device management (MDM), mobile application management (MAM), mobile content management (MCM), secure network gateway, and enterprise-grade mobile productivity apps in one comprehensive solution.
- **File sync and share (ShareFile).** Citrix Workspace offers enterprise-class data services across all corporate and personal mobile devices, while maintaining total IT control. Using ShareFile, you can access, sync, and securely share files from any device. Offline access maintains productivity.
- **Branch networking and WAN.** Citrix Workspace includes NetScaler™ SD-WAN, offering real-time path selection, edge routing, stateful firewall, end-to-end QoS, and WAN optimization.
- **Secure remote access.** NetScaler Unified Gateway consolidates remote access infrastructure and provides SSO across all applications whether in a datacenter, in a cloud, or delivered as SaaS.

Citrix Secure Digital Perimeter

With Secure Digital Perimeter, Citrix significantly expands its network offerings in a SaaS, hybrid, multi-cloud and multi-device world. The approach provides simplified control, 360-degree visibility, and intelligent analytics, with benefits that include:

- **Contextual and secure access.** SSO and secure access provides end-to-end security to apps deployed in data center, cloud, or SaaS to users accessing from remote sites, on any device.
- **Mobile and device security.** User productivity is improved by delivering secure access to corporate apps from both personal and corporate-issued devices.
- **User security and malware protection.** The Secure Digital Perimeter offers a differentiated and coordinated approach to protecting against malware and ransomware.
- **Secure collaboration.** ShareFile offers easy access and collaboration while Secure Digital Perimeter protects against data theft, misuse, and loss.
- **Governance, risk, and compliance.** Organizations can address risk, global compliance standards, and industry regulations for app, user, and device security.
- **Business continuity and app security.** Secure Digital Perimeter helps prevent malicious attacks from affecting business operations while providing network and secure access resilience during outages, natural disasters, and calamities.
- **User behavior analytics and proactive security insights.** Citrix Analytics collects data across Citrix offerings, generating actionable insights that enable administrators to proactively handle user and app security threats, improve performance, and support continuous operations.

The Citrix Ready® Program

The Citrix Ready Program showcases verified products that are trusted to enhance Citrix solutions for mobility, virtualization, networking and cloud platforms. The Citrix Ready designation is awarded to third-party partners that have successfully met test criteria set by Citrix, and gives customers added confidence in the compatibility of the joint solution offering.

Enhancing the Secure Digital Perimeter with Citrix Ready

Citrix understands that security is a rapidly evolving area, with diverse vendors offering important innovations. Augmenting the capabilities of the Secure Digital Perimeter through the Citrix Ready program allows Citrix to partner for a flexible and comprehensive security solution that supports access to any application and data from any device. Organizations can move away from discrete point solutions that bring unwanted complexity without compromising flexibility or choice. Organizations can reward innovation and choose specific security solutions that meet their needs without adding unnecessary administrative complexity, or creating new security vulnerabilities.

General Data Protection Regulation

Organizations that serve customers or individuals in the European Union must comply with the General Data Protection Regulation (GDPR), with an extremely high cost for non-compliance. The GDPR requires affected companies to document the personal data they collect, what they use it for, and how they secure it. In today's world, this mandate includes the vast majority of enterprises and a large proportion of smaller businesses as well. The regulation includes any data that can be used to identify an individual, regardless of how it has been provided, observed, or inferred.

Citrix solutions provide a foundation of confidentiality, integrity, and availability across all types of on-premises, hybrid cloud, and public cloud IT environments. Four key design principles make Citrix solutions ideally suited to aid GDPR readiness:

- Applications are centralized in the data center or cloud so that enterprise data is not stored on individual user devices.
- When sensitive data must be distributed, mobilized, or utilized offline, it is protected in a secure container.
- Context-aware policies around identity, device, location, and network connection give IT granular access control.
- Visibility and user behavior analytics can help detect potential threats to proactively remediate and mitigate risk.

Conclusion

The combination of Pointsharp and Citrix technology streamlines Identity and Access Management for large enterprise organizations—protecting and securing Citrix Workspace with seamless StoreFront, NetScaler, and ShareFile integration. Pointsharp and Citrix provide a complementary approach, offering contextualized authentication that verifies that ensure that users really are who they say they are. Pointsharp App DNA goes further, combining application, user, and device into a unique application signature. The result is a secure, seamless, and simplified user experience with advanced administrative tools and portals that help ensure a productive security environment.

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About Citrix

Citrix (NASDAQ:CTXS) is a leader in mobile workspaces, providing virtualization, mobility management, networking and cloud services to enable new ways to work better. Citrix solutions power business mobility through secure, personal workspaces that provide people with instant access to apps, desktops, data and communications on any device, over any network and cloud. This year Citrix is celebrating 25 years of innovation, making IT simpler and people more productive. With annual revenue in 2013 of \$2.9 billion, Citrix solutions are in use at more than 330,000 organizations and by over 100 million users globally. Learn more at www.citrix.com.

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