

Citrix Workspace, Yubico, and Microsoft

Passwordless Yubikey authentication for Citrix Workspace via Microsoft Azure Active Directory



Embrace passwordless authentication and access to Citrix Workspace using FIDO2 with Microsoft Azure Active Directory and the Yubikey.

With most cyberattacks now beginning with compromised passwords, organizations need better ways to authenticate users and provide access to critical applications, services, and data.¹ Multifactor authentication solutions are an improvement, but have been known to complicate and slow the user experience. In contrast, FIDO2 passwordless authentication with a Yubikey lets Citrix Workspace customers strengthen network security, reduce IT expenses, and improve their productivity.

It's time to leave passwords behind

Long the defacto standard for access and authentication, passwords have indeed outlived their usefulness. Though almost every digital experience still requires passwords in some form, they have become a severe liability. The average U.S. consumer tries to keep track of over 14 different passwords, which they use across all of their web sites and services.² Business users are responsible for even more, having to manage as many as 191 passwords.³ These unsustainable trends lead to inevitable compromise.

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 and Linux app and desktop delivery from Citrix Virtual Apps and Desktops, device security from Citrix Endpoint Management, secure file sync and share with Citrix Content Collaboration, and network security with Citrix Gateway. Only Citrix Workspace offers you a complete choice of device, cloud, and network, streamlined for IT control and simple, secure access for users.

- **Password fatigue leads to data breaches.** Users grow tired of creating new passwords for different services and resist being forced to change passwords periodically, often relying on simplistic passwords that are easy to crack. Password reuse is common, resulting in potential cascading breaches.
- **Forgotten passwords result in high support costs.** Most help desks are inundated with password reset requests. Gartner now estimates that resetting passwords comprises 20% to 50% of all help desk calls.⁴
- **Phishing attacks target credentials.** Phishing attacks are increasingly common, tricking users and collecting complete login credentials. Most phishing now targets mobile users, where smaller screens and credible-seeming presentations make bogus pages more difficult to detect.
- **Stolen credentials spread rapidly.** Once taken, login credentials are a valuable commodity on the dark web. Highly automated bot-driven attacks now commonly use stolen credentials to plunder using stolen e-mail address-password pairs, leading to more costly large-scale breaches.

1. 57% of respondents expressed a preference for passwordless logins. "The 2019 State of Password and Authentication Security Behaviors Report", <https://www.ponemon.org/news-2/87>

2. "Is Cybersecurity Incompatible with Digital Convenience?", <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/is-cybersecurity-incompatible-with-digital-convenience>

3. <https://www.securitymagazine.com/articles/88475-average-business-user-has-191-passwords>

4. <https://www.infosecurity-magazine.com/webinars/password-management-getting>

The Citrix Ready Program

The Citrix Ready technology partner program offers robust testing, verification, and joint marketing for Digital Workspace, Networking, and Analytics solutions—with over 30,000 partner verifications listed in the [Citrix Ready Marketplace](#).

Citrix Workspace, YubiKeys, and Azure Active Directory

Citrix Workspace customers can deploy passwordless access with YubiKeys through Microsoft support for FIDO2 passwordless single sign-on in Azure Active Directory (AAD). FIDO2 lets users employ conventional devices to easily authenticate to online services in both mobile and desktop environments. With FIDO2-compliant YubiKeys, users can securely authenticate without passwords to access Citrix Workspace from anywhere, even shared workstations. Organizations benefit from improved security, lower risks, and potential cost reductions from password reset and access management administration.

With FIDO2 passwordless login, the YubiKey acts as a single hardware authenticator with no shared secrets. It works across all the services a user interacts with, including business applications and services at work, social networks, and other consumer applications at home. Passwordless login offers several significant benefits to Citrix Workspace users, including:

- **Improved usability.** With passwordless login, users never have to pause to enter passwords or struggle to remember them. Access becomes fast and easy with a tap of the YubiKey.
- **Improved security.** Eliminating passwords removes security vulnerabilities from stolen passwords, passwords harvested by phishing, and brute force attacks on simple passwords.
- **Improved efficiency.** A passwordless environment liberates IT administrators from provisioning tens and even hundreds of thousands of passwords. IT support load decreases, while security and usability improves.



Figure 2. YubiKey 5 Series form factors
(Note to reviewers: need high-res image)

FIDO2 authentication in practice

Citrix and Microsoft have a 30-year history of delivering effective solutions to our joint customers. With Microsoft's support for FIDO2-based sign-in with Azure AD and the Yubikey, Citrix Workspace administrators can begin to provide passwordless logins to their users. This secure and user-friendly alternative to username and password-based logins immediately begins to mitigate risks and costs created by poor password management.

As shown in Figure 1, the Citrix Workspace identity broker microservice integrates with the YubiKey 5 Series and Azure AD to provide single sign-on to the full range of apps and services supported by Citrix Workspace. Citrix Workspace administrators enable passwordless access for their users through the Citrix Cloud administration panel, selecting Azure AD as an identity provider (IdP). An Azure AD administrator then grants the necessary permissions to Citrix Workspace.

Once an administrator authenticates and grants the proper permissions, the two systems are automatically linked, and Azure AD becomes a potential IdP for Citrix Workspace users. Administrators can then enable Azure AD as the preferred IdP for a particular Citrix Workspace environment. Users can then start connecting to Citrix Workspace with a FIDO2 security key, like Yubico's Citrix Ready YubiKey 5 Series.

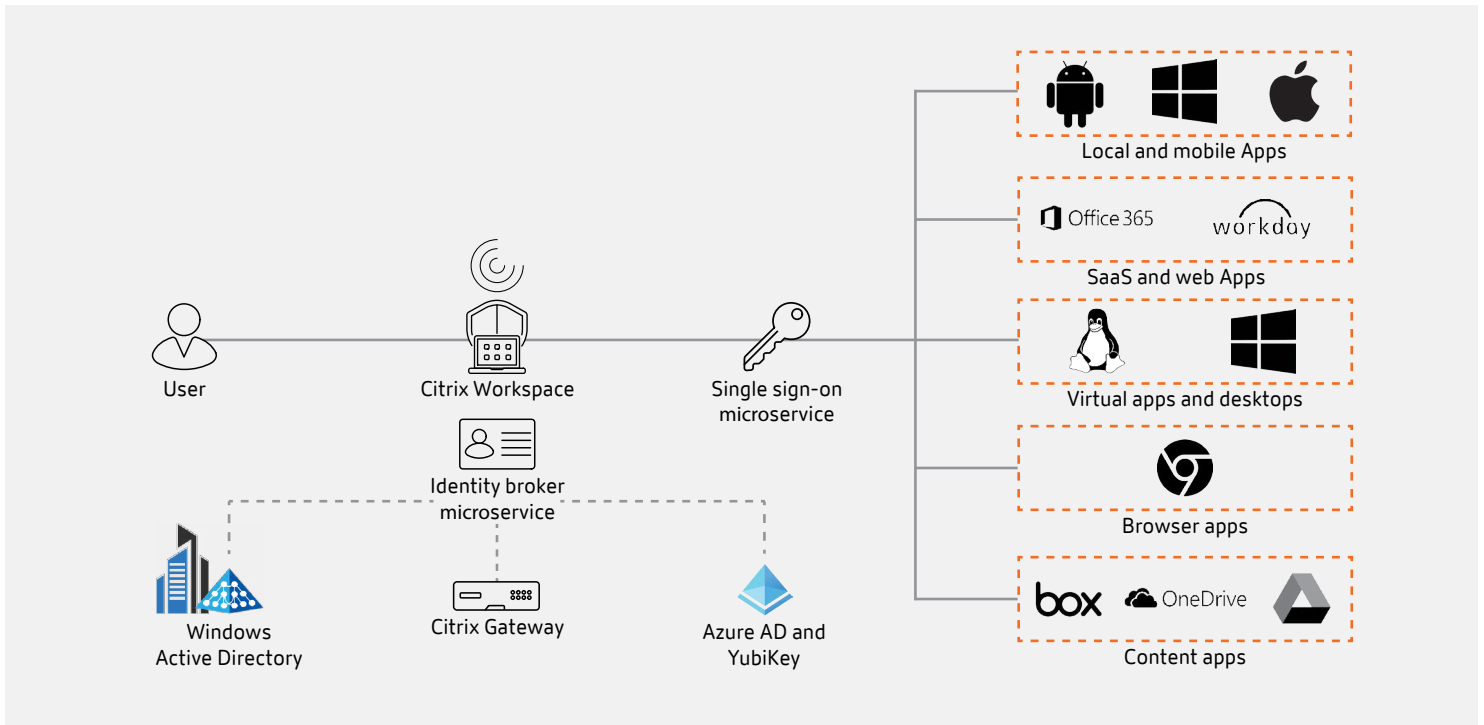


Figure 1. Passwordless login for Citrix Workspace with YubiKey and Azure AD

When the end-user attempts to log in to their Citrix Workspace experience, they are automatically redirected to an Azure AD login page for sign-on. Instead of entering a username and password, they are directed to insert their FIDO2 key, enter their PIN, and tap the key with their finger. At that point, the user is fully authenticated and has access to all of their resources in Citrix Workspace.

YubiKey 5 series and Citrix Workspace

Utilizing a YubiKey to provide passwordless access to Citrix Workspace simplifies access to everything the user needs to perform their job by eliminating multiple potential authentication mechanisms. Citrix Workspace unifies access to local and mobile apps, Software as a Service (SaaS) and web apps, Citrix virtual apps and desktops, browser apps, as well as content apps via Citrix Content Collaboration.

The YubiKey 5 Series is a family of multi-protocol security keys enabling expanded use cases for strong two-factor, multifactor, and passwordless authentication. The YubiKey 5 Series keys support FIDO2/WebAuthn, FIDO U2F, one-time password (OTP), and smart card, and provide a choice of form factors for desktop, laptop, and mobile (Figure 2). For passwordless authentication, the YubiKey 5 Series acts as a hardware authenticator, delivering strong single-factor authentication to replace weak passwords as part of a rapid but secure tap-and-go experience (Figure 3).



Figure 2. YubiKey 5 Series supports multiple protocols in a range of form factors



Figure 3. YubiKey 5 Series offers tap-and-go access to Citrix Workspace

Conclusion

The combination of Citrix Workspace, YubiKey 5 Series keys, and Microsoft Azure AD provides a seamless passwordless authentication solution. Users gain secure and streamlined access to Citrix Workspace, retaining productivity without having to remember passwords or struggle with different multifactor authentication solutions for each app and service. Administrators can finally begin to leave insecure passwords and expensive password administration support behind. Organizations reduce the risk of catastrophic security breaches from phishing attacks, weak passwords, and antiquated and vulnerable password mechanisms.

For more information, view Yubico's profile on the Citrix Ready Marketplace at citrixready.citrix.com/yubico-inc/yubikey-5-series.html.



About Yubico

Yubico sets new global standards for simple and secure access to computers, mobile devices, servers, and internet accounts. The company's core innovation, the YubiKey, delivers strong hardware protection, with a simple touch, across any number of IT systems and online services. Yubico is a leading contributor to the FIDO2, WebAuthn, and FIDO Universal 2nd Factor open authentication standards, and the company's technology is deployed and loved by 9 of the top 10 internet brands and by millions of users in 160 countries. Learn more at www.yubico.com.



About Citrix Ready

The Citrix Ready technology partner program offers testing and verification for joint Digital Workspace, Networking, and Analytics solutions. After a robust testing process, validated partner solutions are listed in the Citrix Ready Marketplace, giving customers and channel partners a simple and effective way to explore and select Citrix Ready verified solutions—increasing confidence while reducing risk. Learn more at citrixready.citrix.com.



Enterprise Sales

North America | 800-424-8749
Worldwide | +1 408-790-8000

Locations

Corporate Headquarters | 851 Cypress Creek Road Fort Lauderdale, FL 33309, United States
Silicon Valley | 4988 Great America Parkway Santa Clara, CA 95054, United States

©2020 Citrix Systems, Inc. All rights reserved. Citrix, the Citrix logo, and other marks appearing herein are property of Citrix Systems, Inc. and/or one or more of its subsidiaries, and may be registered with the U.S. Patent and Trademark Office and in other countries. All other marks are the property of their respective owner(s).