

2024 North America Community Meeting

Safeguarding Your Boat So You Don't Get Hooked





Andrew Jamieson

Vice President, Solutions
PCI Security Standards Council



Tim Cappalli

Standards Architect
Okta



Megan Shamas

Chief Marketing Officer
FIDO Alliance

Who has heard of the FIDO Alliance?



Who has heard of passkeys?



Who knows what phishing is?



What is the FIDO Alliance?



The FIDO Alliance is an open industry association with a focused mission: **reduce the world's reliance on passwords.**

To accomplish this, the FIDO Alliance promotes the development, use and compliance with standards for authentication and device attestation.

The FIDO Alliance works to fulfill its mission through...



Technical Specifications

Define an open, scalable, interoperable set of mechanisms that reduce the reliance on passwords



Industry Certification Programs

Ensure interoperability, security and usability of products, services and components



Market Adoption Programs

Promote the use of FIDO globally to drive adoption and education






"On the Internet, nobody knows you're a dog."



GARAGE
NO
ENTRY

 Username

 *****

Remember Me

[Forgot Password?](#)

LOGIN

REGISTER



The Foundation of Authentication is Fundamentally Flawed

When our primary factor is passwords → and 2FA & MFA are no longer secure...

81%

of hacking-related breaches are caused by weak or stolen passwords
(Ping Identity)

43%

Gave up on a purchase because they forgot their password
(FIDO Alliance)

50%

Rise in MFA-related security events in Q1 2024, with 25% involving unauthorized push notifications.
(Thales)

64%

either use weak passwords or repeat variations of passwords
(Keeper)

Easily phished or socially engineered ▲ Difficult to use and maintain ▲ MFA can be hacked

Generative AI adds fuel to the phishing fire

967%

Rise in credential phishing
in particular since Q4 2022

(Slashnext)

1265%

Rise in malicious phishing
emails since Q4 2022

(Slashnext)

54%

Of consumers have noticed
phishing messages become more
sophisticated in last 60 days

(FIDO Alliance)

Multi-Factor Authentication Example



Password / OTP

Attacking Authentication

Non-Complex Password



Guessing, credential stuffing, bruteforce, phishing
Session / token hijack, technology bypass, enrollment attacks

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Complex Password



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Attacking Authentication

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Complex Password



Credential stuffing, bruteforce, phishing
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**Complex Unique
Password**



Bruteforce, phishing
Session / token hijack, technology bypass, enrollment attacks

Attacking Authentication

Non-Complex Password

Guessing, credential stuffing, bruteforce, phishing
Session / token hijack, technology bypass, enrollment attacks

Complex Password

Credential stuffing, bruteforce, phishing
Session / token hijack, technology bypass, enrollment attacks

Complex Unique Password

Bruteforce, phishing
Session / token hijack, technology bypass, enrollment attacks

Complex Unique Password + OTP

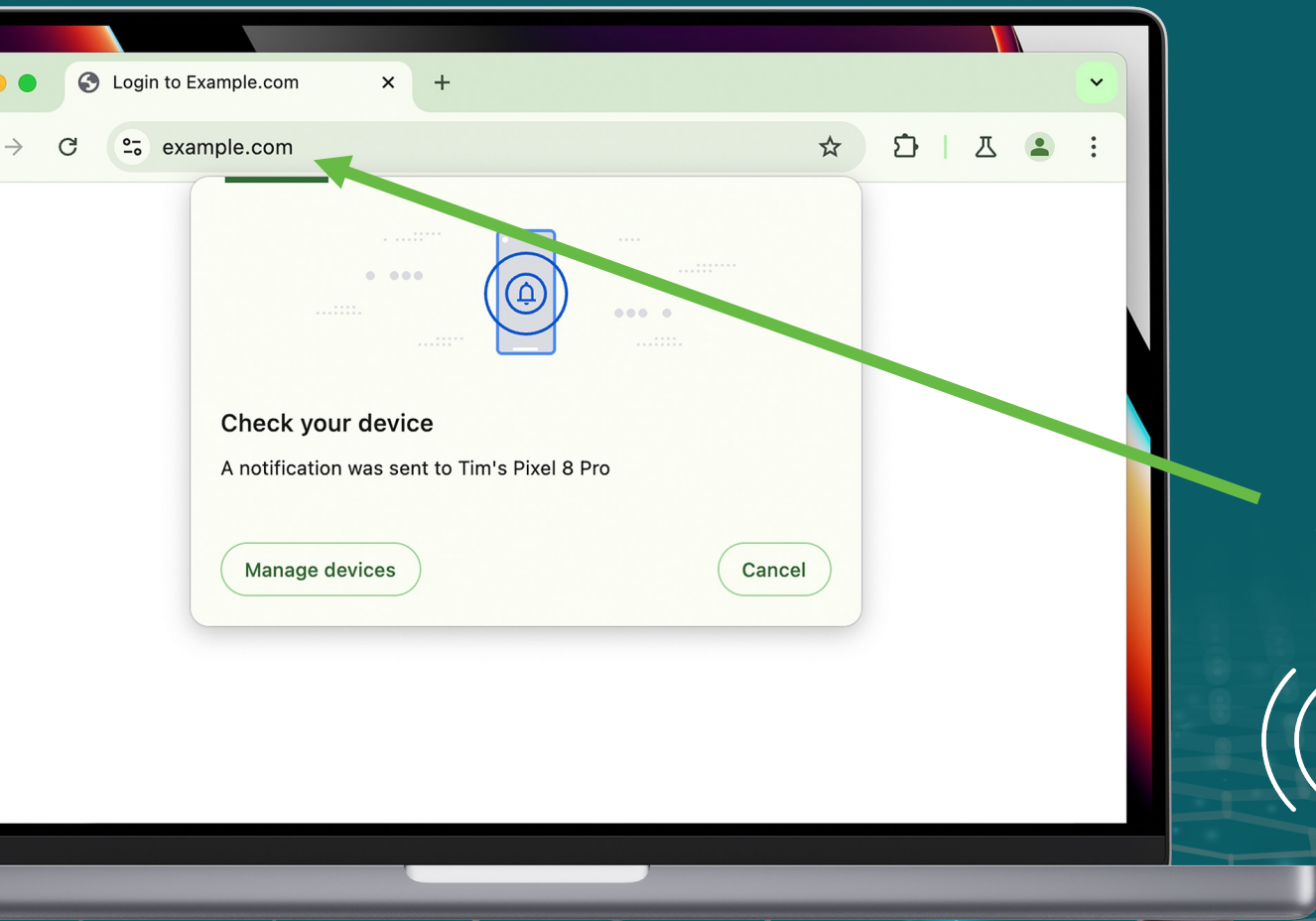
Phishing, SIM hijack/swapping
Session / token hijack, technology bypass, enrollment attacks

Phishing Resistant Authentication

Session / token hijack*, technology bypass, enrollment attacks

*Note: Device / session binding, ZTA can help with this

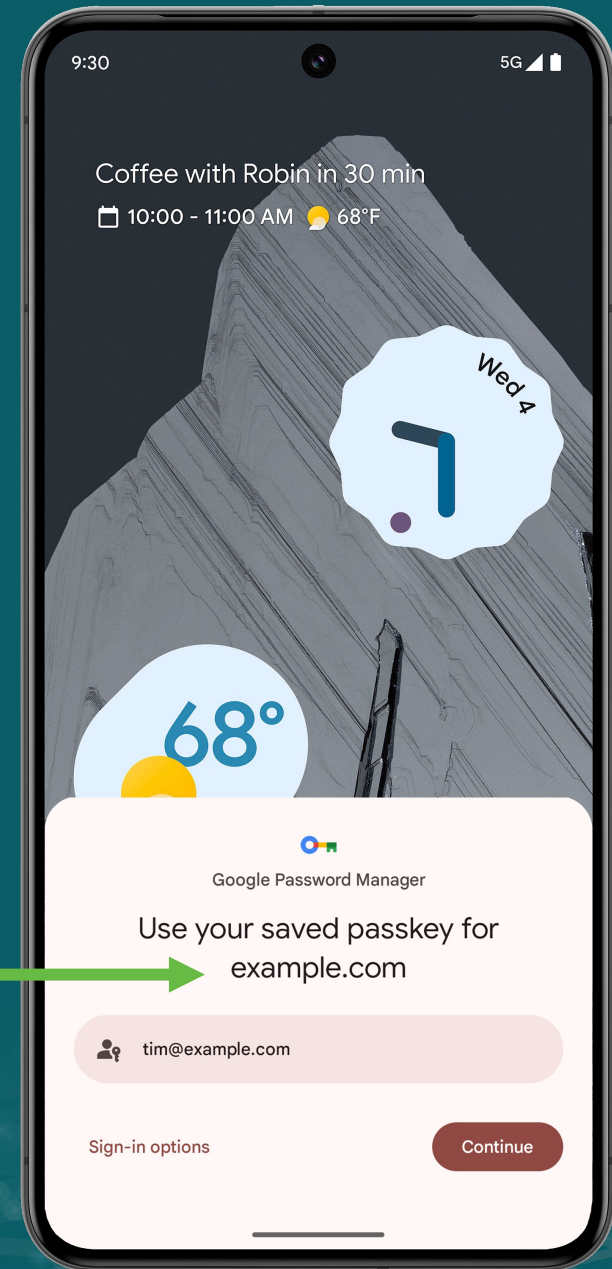
How Does Phishing Resistant Authentication Work?



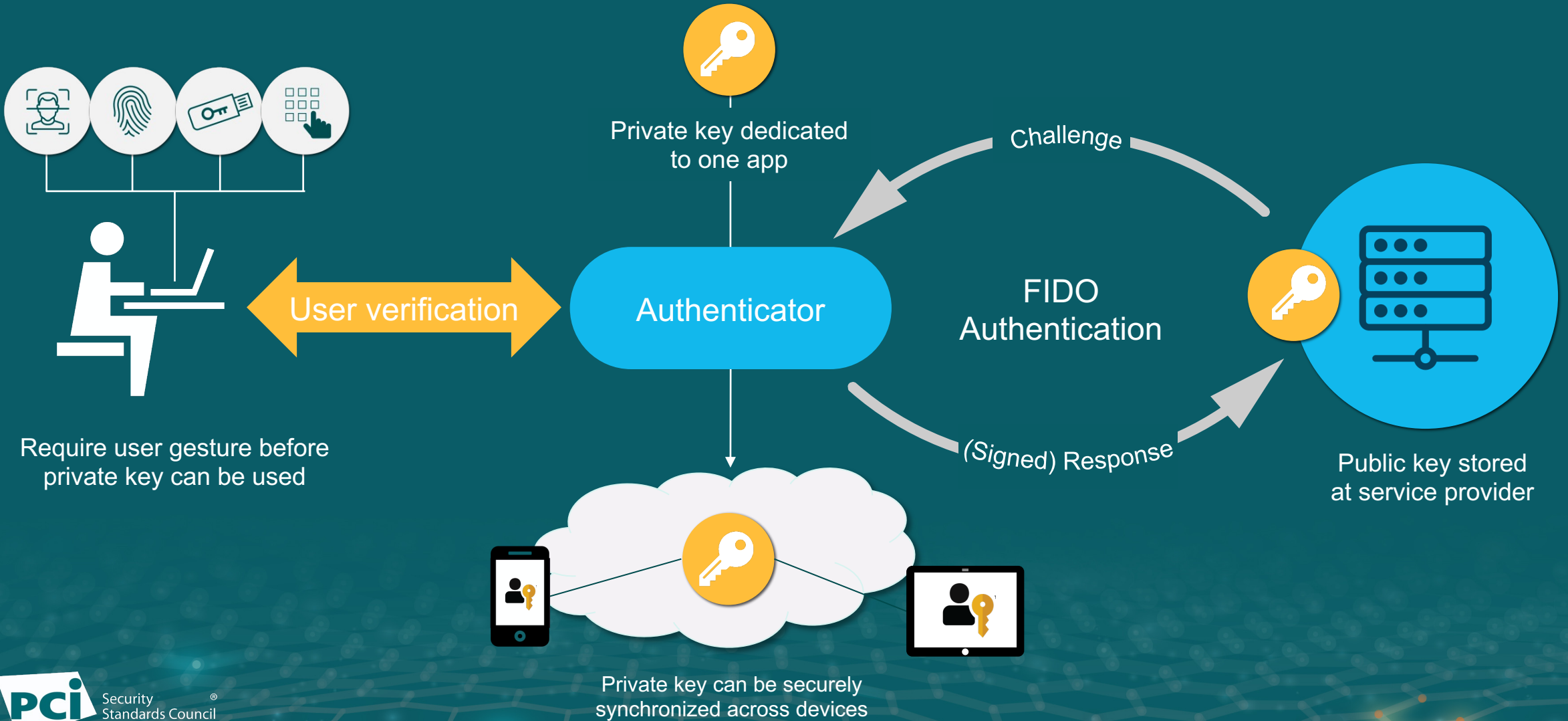
*public key
cryptography*

name binding

(((proximity)))

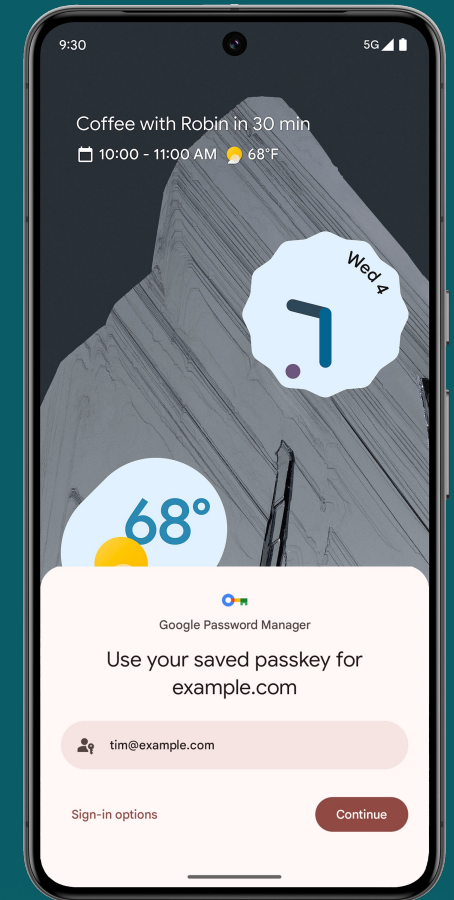
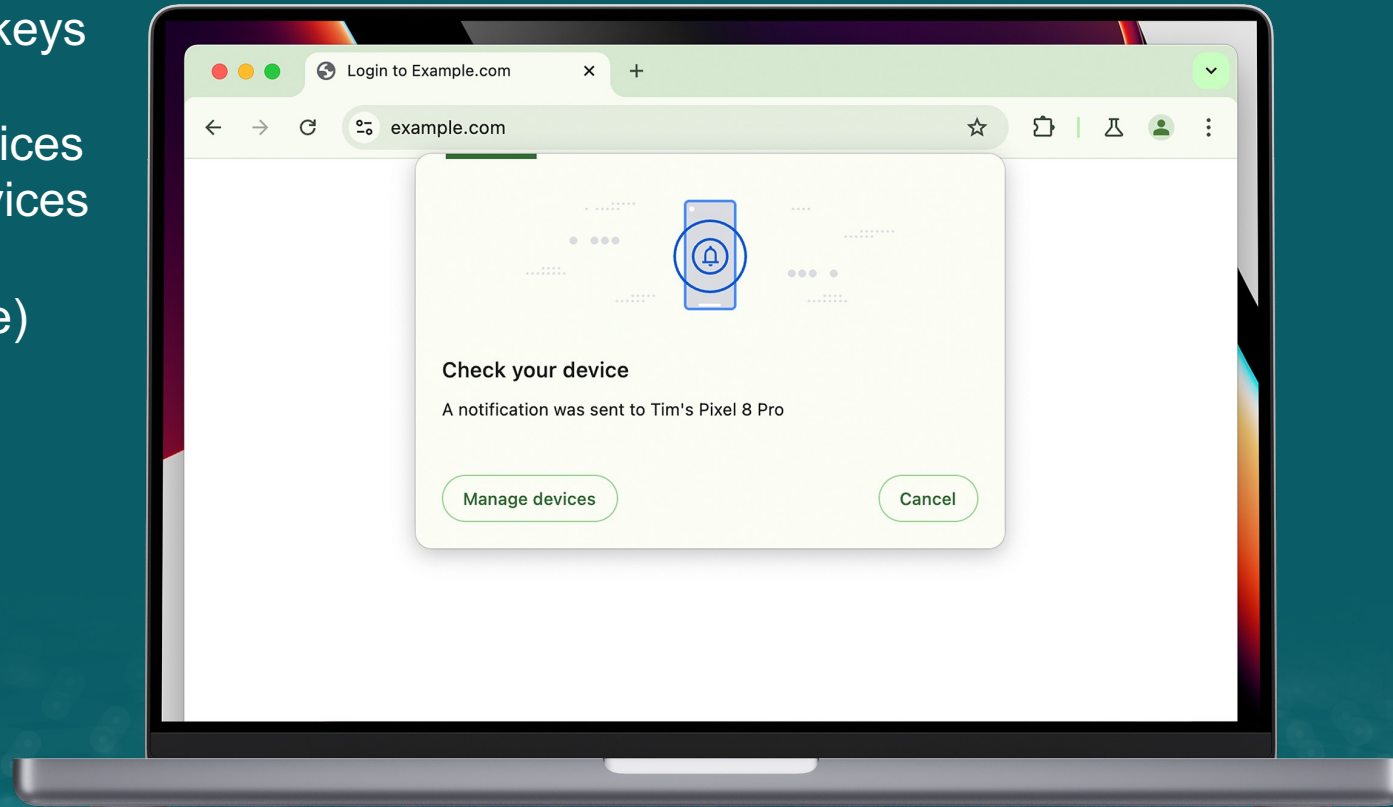


Same Approach – With New Syncing Capabilities



Cross-Device Authentication

Enables passkeys to be used to sign-in to services on nearby devices (as well as on primary device)



What is a Passkey?

Passkey

/ˈpas, kē/ noun

Passkeys are a password replacement based on FIDO protocols that provide faster, easier, more secure sign-ins to online services.

A passkey may be synced across a secure cloud so that it's readily available on all of a user's devices, or it can be bound to a dedicated device such as a FIDO security key.

4x simpler

Passkeys are 4x simpler to use since they don't need to be remembered or typed. You just use your fingerprint, face scan, or screen lock to sign in across all your devices and platforms.

Source: Google



Chrome on Windows



Firefox on Windows

Chrome on Android

Edge on Android

Apps on iOS



Available



Safari on iOS

Chrome on Mac

Edge on Mac



Chrome on iOS

Edge on Ubuntu

Edge on iOS



Today!



Apps on Mac

Apps on Android

Chrome on Ubuntu

Safari on Mac



Edge on Windows

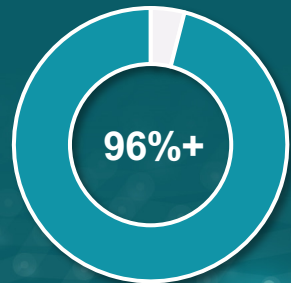


Passkey Adoption by the Numbers

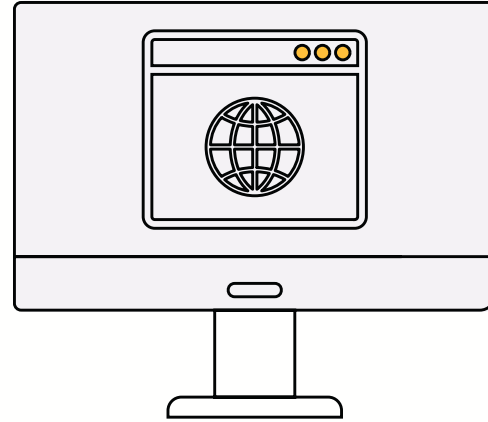
(Since October 2022)



of the world's top
100 websites and services

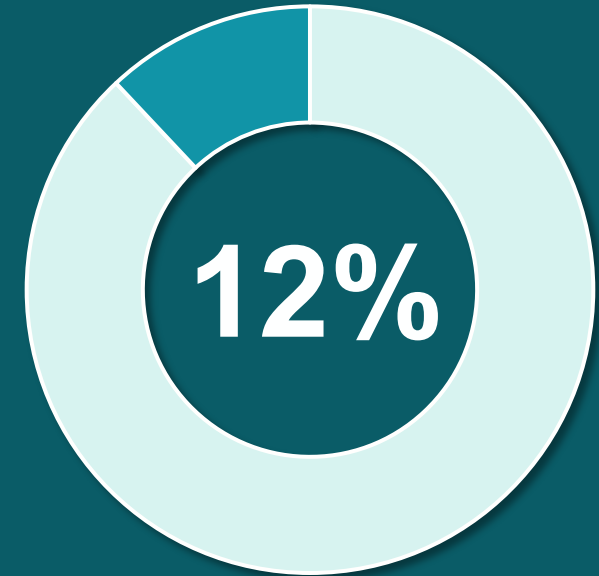


of active
browsers

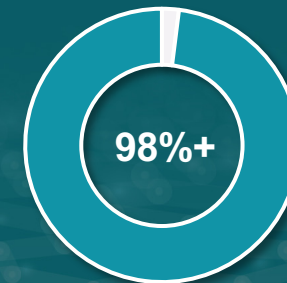


More than **13B**

accounts can now leverage
passkeys for sign in



of the world's top
250 websites and services



of mobile
devices

Proven Success



Within the first few months...

- 97% login success rate
- 14% eligible user adoption rate
- 2% reduction in SMS OTP login

mercari

- Sign-in success rate grew from 67.7% (SMS 2FA) to 82.5% — over a 21% improvement
- Authentication time decreased from 17s (SMS 2FA) to 4.4s – nearly 4x faster



- 4x improvement in sign-in success rate (vs passwords)
- ½ the sign-in time
- 400M+ accounts have used passkeys
- 1B+ sign-ins with passkeys

AIR NEW ZEALAND

- 30% opt-in in first 24 hours
- 4.7x improvement time to complete & improvement in success rate
- 50% reduction in abandonment rates
- Reduced account recovery calls and call center attacks

PCI DSS and Phishing-Resistant Authentication

PCI DSS Requirement

8.4.1 MFA is implemented for all non-console access into the CDE for personnel with administrative access.

Interpretation

Phishing-resistant authentication can be used, but must be coupled with some other authentication factor

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8.4.2 Guidance

This requirement does not apply to:

User accounts that are only authenticated with phishing-resistant authentication factors.

Phishing-resistant authentication can be used without another authentication factor

This requirement is a best practice until 31 March 2025, after which it will be required and must be fully considered during a PCI DSS assessment.

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Console access does not include situations where the system is used to access other system components over a networked connection. For example, access via a laptop or workstation using a physically connected keyboard is not considered “console access” if that system requires a networked connection to access any other system component. (from FAQ 1577)

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It is NOT a requirement of PCI DSS that all factors are authenticated prior to indication of success of any one factor

Recommendations

- 12-character password requirements are coming (April 2025)
- MFA for all non-console access is coming (April 2025)
- Ideally, replace passwords with phishing-resistant authentication where you can (then no need to worry about 12-character passwords or MFA for non-admin access!)
- Secure your enrollment and authentication reset processes
- Consider the security around your authentication – enrollment, reset, auth tokens, OTP delivery
- Most auth uses cryptography, so keep PCI DSS 12.3.3 in mind!

Where Do I Find Out More?



fidoalliance.org/passkeys

Hands Up If You Still Don't Know What FIDO, Passkeys, or Phishing Are?



Thank you!

