

# Passwords & MFA — from risk to defence

More than three quarters of all data breaches involve compromised or weak credentials. We explain the 2026 state of the art — passkeys, FIDO2, MFA fatigue — and what employees need to do about it in practice.

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Source: [awareness-as-a-service.com/en/resources/threats/passwords-mfa](https://awareness-as-a-service.com/en/resources/threats/passwords-mfa)

## Why are passwords and MFA so critical?

The password has been the weakest link in the security chain for decades — and simultaneously the one most frequently exploited. **Compromised or weak credentials** are implicated in more than three quarters of data breaches, according to the Verizon DBIR. Possession of credentials means no malware is needed.

**Multi-factor authentication (MFA)** was introduced as the counterweight: anyone who must supply a second factor (code, push confirmation, hardware token) in addition to a password is protected against pure password compromise. Attackers have

adapted, however: **MFA fatigue** (also called push bombing) has established itself as its own attack technique — attackers send mass push confirmations until an irritated user approves one.

In 2026, the passwordless future is drawing closer. **Passkeys** (FIDO2/WebAuthn) replace passwords with cryptographic key pairs that are phishing-resistant, device-bound, and cannot be reverse-decrypted. Major platforms (Microsoft, Google, Apple) already support them in production environments.

## At a glance

01

### Password reuse is the biggest risk

Anyone using the same password on multiple sites risks one breach opening all their other accounts. Credential stuffing exploits exactly this.

02

### MFA is not a cure-all

SMS OTP is weaker than app-based TOTP, which is weaker than FIDO2/passkeys. MFA fatigue and adversary-in-the-middle attacks bypass SMS and push.

03

### Passkeys are production-ready in 2026

For many enterprise applications, FIDO2/passkeys are already available. They are phishing-resistant because they are domain-bound — a fake website cannot use the key.

## How to recognise password and MFA risks

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### Password reuse

Employees using their company password for personal services too. A breach at any personal service opens the corporate account.



### Passwords on post-its or in plain-text files

Handwritten or digitally unprotected passwords are accessible to anyone with physical or digital access to the workstation.



### MFA fatigue (push bombing)

Anyone who receives an unexpected MFA push request they did not trigger should reject it — not approve it out of convenience.



### Account sharing

Shared accounts (e.g. company social media) cannot be individually revoked and cannot be cleanly separated after a departure.



### Weak password policies

"Password1!" meets many formal requirements (upper, lower, digit, special character) but is trivial to guess. Policies that mandate complexity but not length create false security.

## How to protect yourself

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### For employees

- **Use a password manager:** One unique, long random string per account — the manager remembers everything. Recommended options include Bitwarden, 1Password, and KeePassXC.
- **Enable MFA everywhere** it is available — at minimum app-based TOTP (Google Authenticator, Aegis). Activate passkeys when offered.
- **Reject and report unexpected MFA push requests.** You did not initiate a login — so the request is coming from someone else.
- **Never share passwords** — not even with IT helpdesk or a manager. No legitimate system asks for this.
- **Change passwords when compromise is suspected** — not on a fixed routine (routine rotation leads to predictable and weaker passwords).

### For administrators

- **Plan FIDO2/passkey rollout for all critical systems** — Microsoft Entra, Okta, Ping Identity, and other IAM platforms already support this in production.
- **Enable MFA fatigue protection:** Number Matching (user must confirm a displayed number) and Additional Context (location, app name) in the push configuration.
- **Password spraying and credential stuffing protection:** Account lockout policies, anomaly detection for unusual login geographies, HIBP integration on password changes.
- **Harden privileged accounts:** Admin accounts get FIDO2, not SMS MFA, no shared accounts.
- **Provide an enterprise password manager** — lower the barrier to good behaviour and it is more likely to happen.

## Real cases

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**CASE 01 · INSURANCE COMPANY · DE · Q2/2025**

A credential stuffing attack against the customer portal: attackers used a list from a fitness-app data breach and tried those email/password combinations. Several hundred customer accounts were taken over within a single night.

**Damage:** customer data compromised, mandatory GDPR notification · **Detection:** anomaly detection triggered after 3 hours · **Lesson:** Rate limiting and HIBP integration on login would have blocked the attack significantly earlier.

**CASE 02 · NGO · CH · Q1/2026**

An employee habitually approved an MFA push request at 2:07 am without thinking. The attacker had the password from an old breach and sent push requests until one was confirmed. Through the compromised account, donor data and financial reports were downloaded.

**Damage:** data breach, major donor trust affected · **Detection:** user reported access problems the next morning · **Lesson:** Number Matching would have prevented the accidental confirmation.

## What to do if it happens?

### THE FIRST 15 MINUTES

1. **Change the password immediately** — from a device that is not compromised.
2. **Invalidate all active sessions** (on most services: "sign out all devices").
3. **Inform IT Security** — especially if a corporate account is affected.
4. **Check MFA devices:** Were new devices or apps registered as a second factor without your knowledge?
5. **Check other accounts using the same password** and change those immediately too.
6. **HIBP check (haveibeenpwned.com):** See whether your email address appears in known data breaches.

## Frequently asked questions

### How long should a secure password be?

At least 16 characters if it is still a classic password. Length matters more than complexity: "Coffee-Monday-Blue-42" is more secure than "P@sswOrd!". Better still: let a password manager generate a random 24-character string.

### What is the difference between TOTP and FIDO2?

TOTP (Time-based One-Time Password, e.g. Google Authenticator) generates a new code every 30 seconds — but it can be intercepted and relayed by an attacker in real time (adversary-in-the-middle). FIDO2/passkeys are domain-bound: a fake website cannot use the key because the domain check is built into the protocol.

### Should IT know an employee's password?

No. Passwords should be known only to the user and stored at the provider only as a hash. When IT needs to reset a password, this is done through a reset process — not through knowledge of the current password.

### Are password managers themselves secure?

Commercial password managers (Bitwarden, 1Password) are recommended by security experts and audited regularly. The risk from a single compromised master password is real — which is why the master password must be strong and used only for the manager. MFA on the manager account is mandatory.

## Related topics

Weak credentials are the entry point for phishing, CEO fraud, and deepfake-assisted attacks. AI-

powered attacks make password compromise faster and more convincing than ever.

