cisco The bridge to possible

No More Leaks

Felix Nijpels, Nationale Politie

POLITIE

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« waakzaam en dienstbaar »

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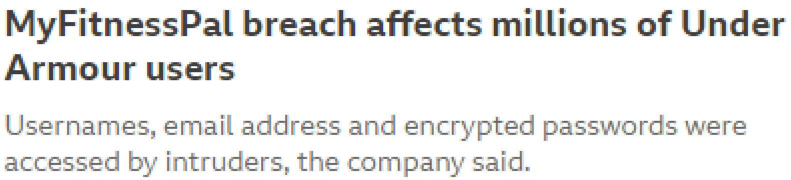
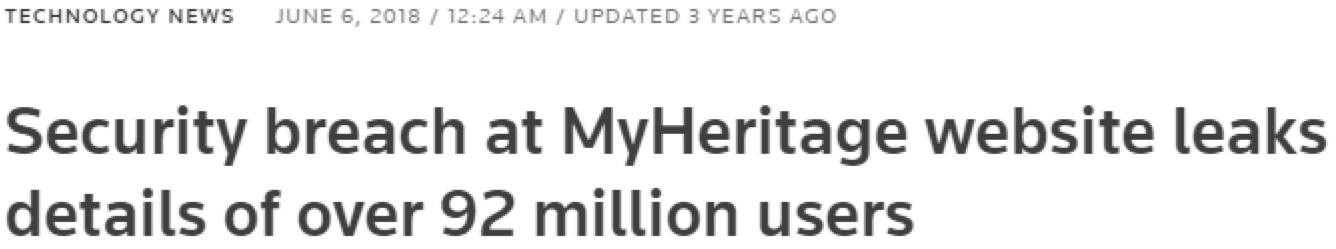


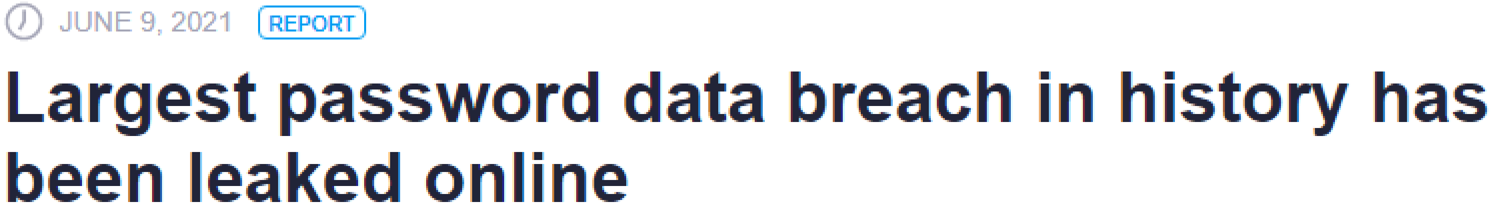
MyFitnessPal breach affects millions of Under Armour users

Usernames, email address and encrypted passwords were accessed by intruders, the company said.



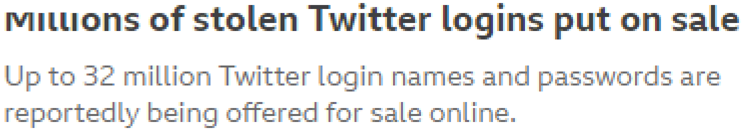
TECHNOLOGY NEWS JUNE 6, 2018 / 12:24 AM / UPDATED 3 YEARS AGO

Security breach at MyHeritage website leaks details of over 92 million users



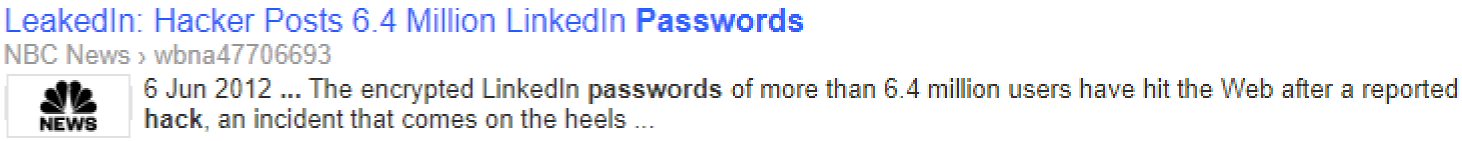
JUNE 9, 2021 REPORT

Largest password data breach in history has been leaked online



Millions of stolen Twitter logins put on sale

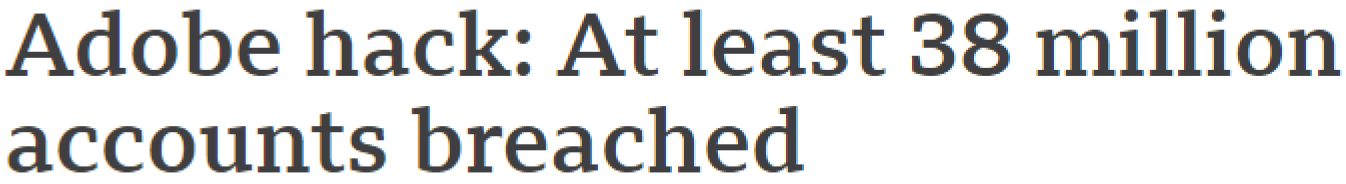
Up to 32 million Twitter login names and passwords are reportedly being offered for sale online.



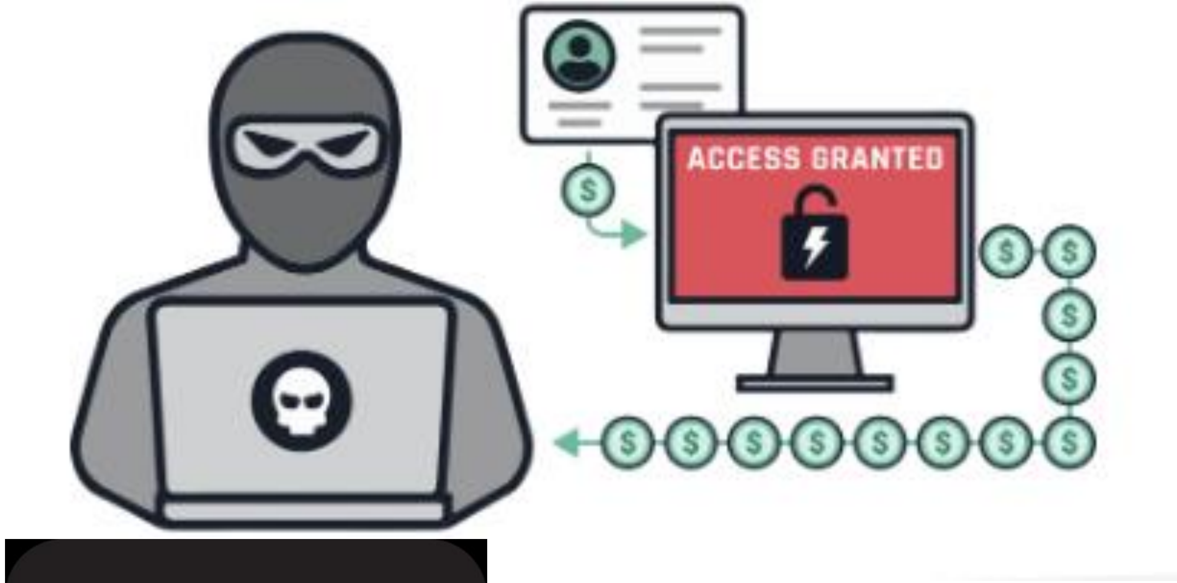
LeakedIn: Hacker Posts 6.4 Million LinkedIn **Passwords**

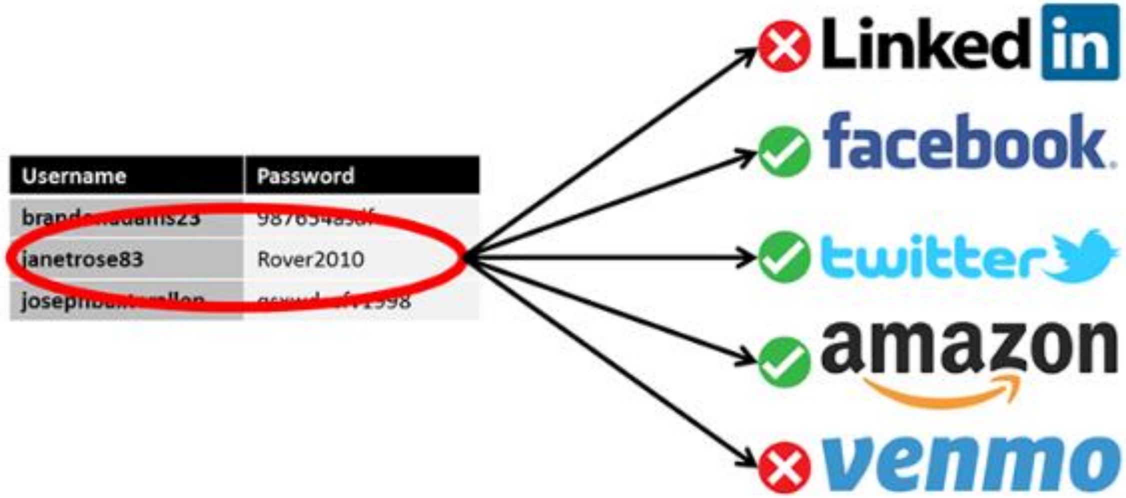
NBC News › wbna47706693

6 Jun 2012 **...** The encrypted LinkedIn **passwords** of more than 6.4 million users have hit the Web after a reported **hack**, an incident that comes on the heels ...



Adobe hack: At least 38 million accounts breached





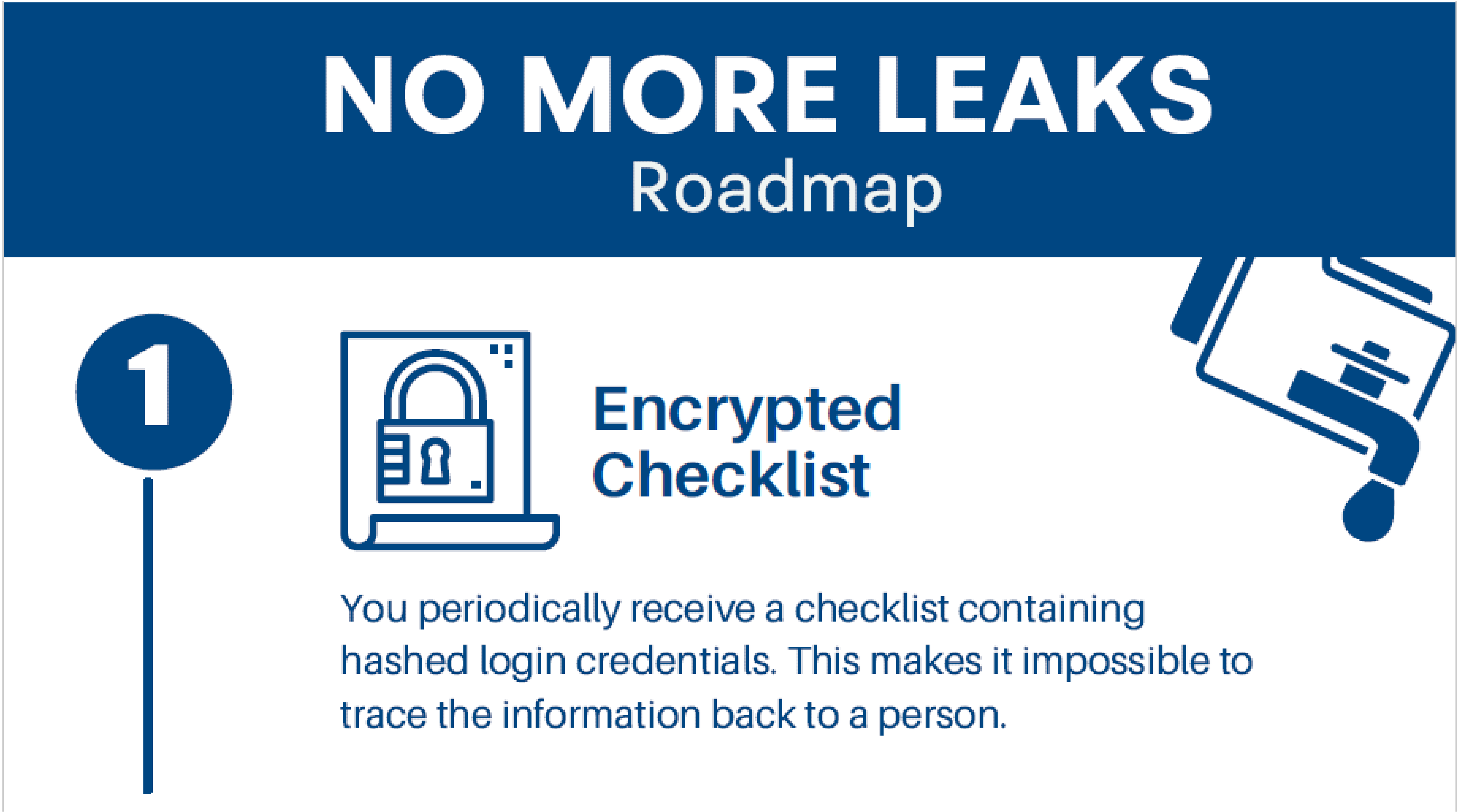
Username	Password
brandonadams23	987654asdf
janetrose83	Rover2010
josephbu[illegible]	[illegible]1998

What is No More Leaks?

- What: public private partnership (PPP)
- Police gathers these lists, encrypts each string "*usernamepassword*" with a hash function.
- Lists are distributed to participating online platforms.
- These platforms can then implement these "control lists" in their login system as an additional anti-fraud check for their users.

Why No More Leaks?

- Alternative intervention: prevent crime instead of fight crime.
- Goals to achieve:
  - Prevent abuse of credentials used by criminals
  - Make selling lists with leaked credentials unattractive (disturb the criminal business model).
- Help companies achieve more resilience, enabling better protection.
- Indirect victim notification: companies can notify their customers and let them change their password.



NO MORE LEAKS

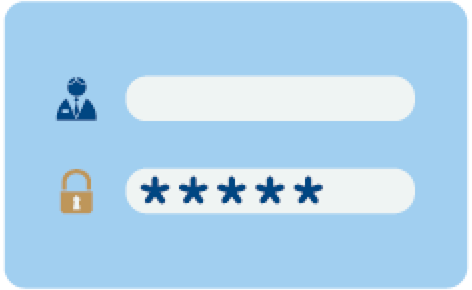
Roadmap

1

Encrypted Checklist

You periodically receive a checklist containing hashed login credentials. This makes it impossible to trace the information back to a person.

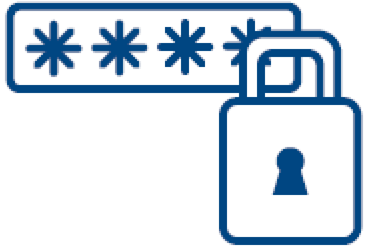
2



Change the login system

As soon as a visitor enters their login credentials on your website, you join the e-mail address and password into a one string: email@addresspassword.

3

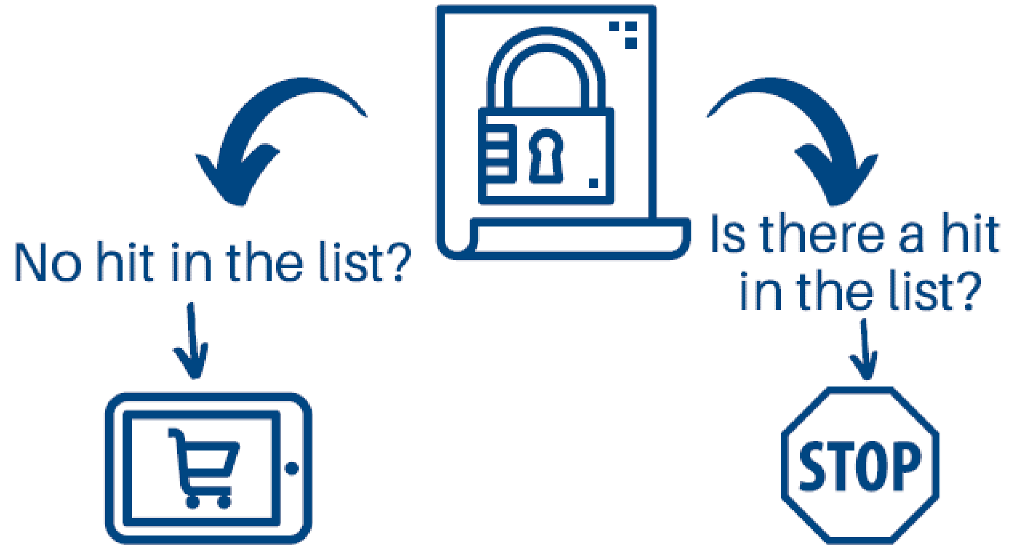


Hash string

The string obtained in step two needs then to be hashed using the sha256 algorithm.

4 Seach in checklist

Check if the hash appears in the supplied checklist.



No hit in the list?

Is there a hit in the list?

The visitor can continue to log in to the website.

Force a password reset procedure by sending an e-mail tot the address associated with this account.

Note: remember to enable NoMoreLeaks in de password change process as well.

Statistics and coverage

484.371.657 leaked credentials

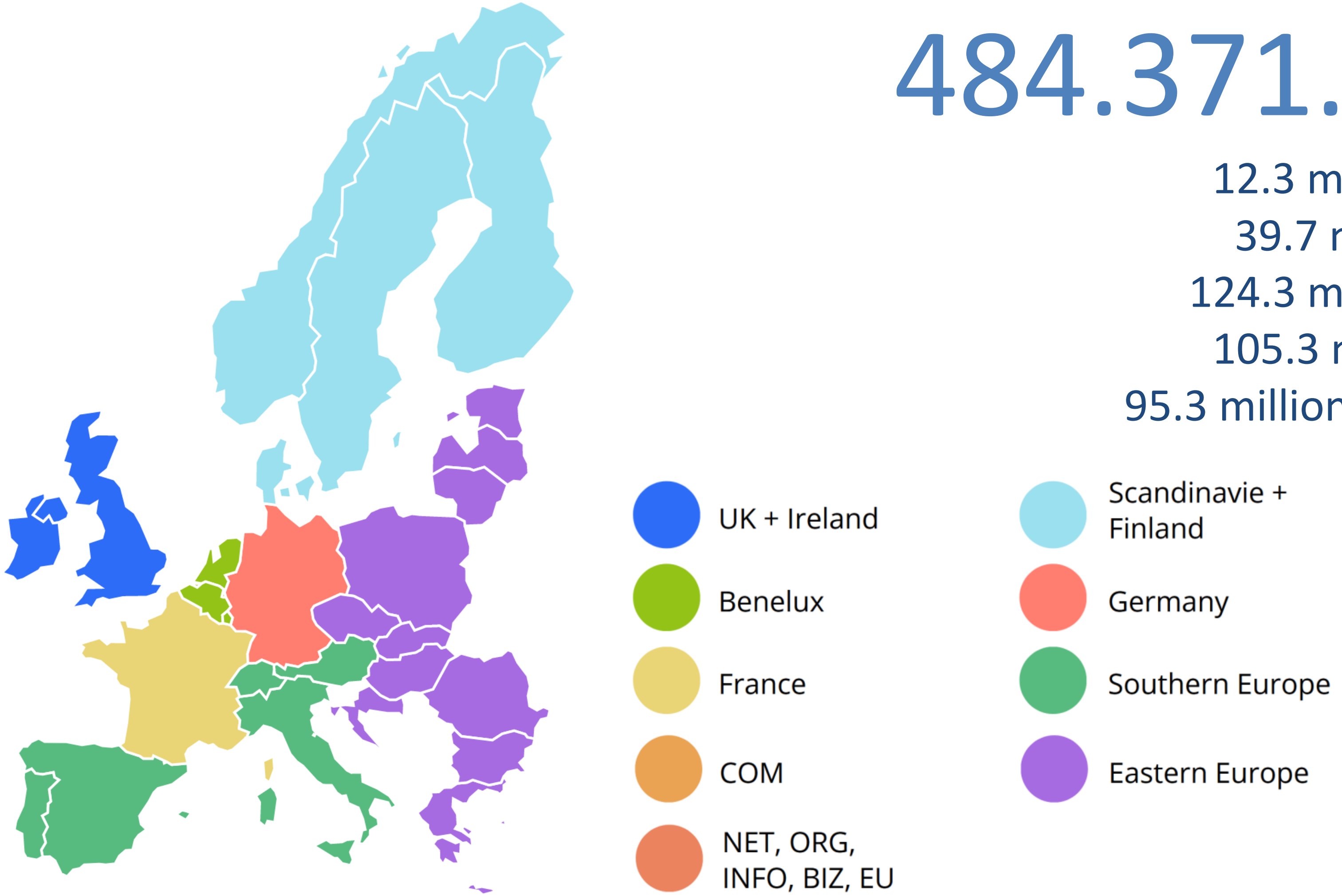
12.3 million Benelux

39.7 million .COM

124.3 million Germany

105.3 million France

95.3 million Southern-Europe



Requirements NoMoreLeaks

1. Participation is free
2. Sign Covenant
3. Share statistics with the police to measure the impact and success of the project.

Evaluation pilot

Deployment with 388 million leaked credentials

“Besides CAPTCHA, NoMoreLeaks is the best prevention against abuse of credentials”

“The pilot is already a big success, and the more data & partners, the more effective NoMoreLeaks is!”

FAQ: differences with HIBP

- HIBP only shares which passwords have been leaked, not which *combinations* of credentials have been leaked.
- Person A and B use the same password. When credentials of person A leak out, with NML, person B would just login. HIBP would block this.
- NML ensures fewer false positives, this can lead to less influence on conversion.
- NML also includes non-public credentials from criminal investigations.
- NML provides hashes to participants for internal use. HIBP is an external public API.
- NML is free.

No More Leaks

Questions?

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The bridge to possible

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