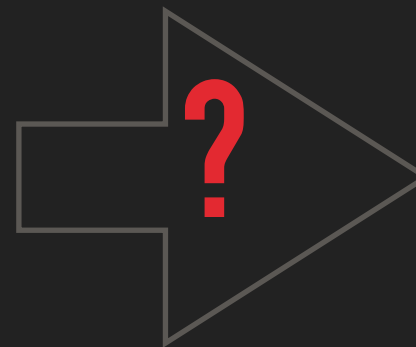


FROM PASSWORD TO KEY

password

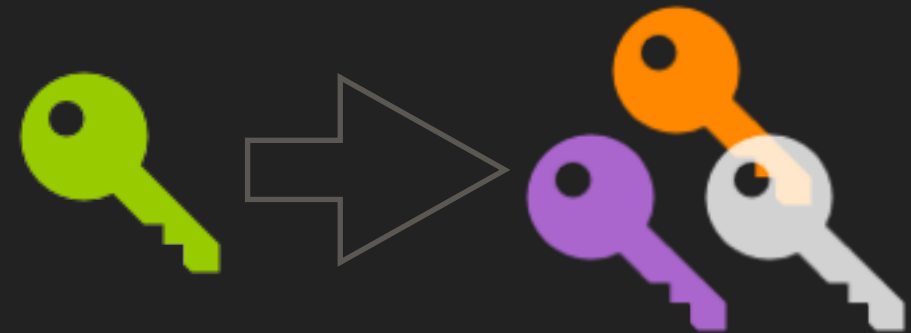
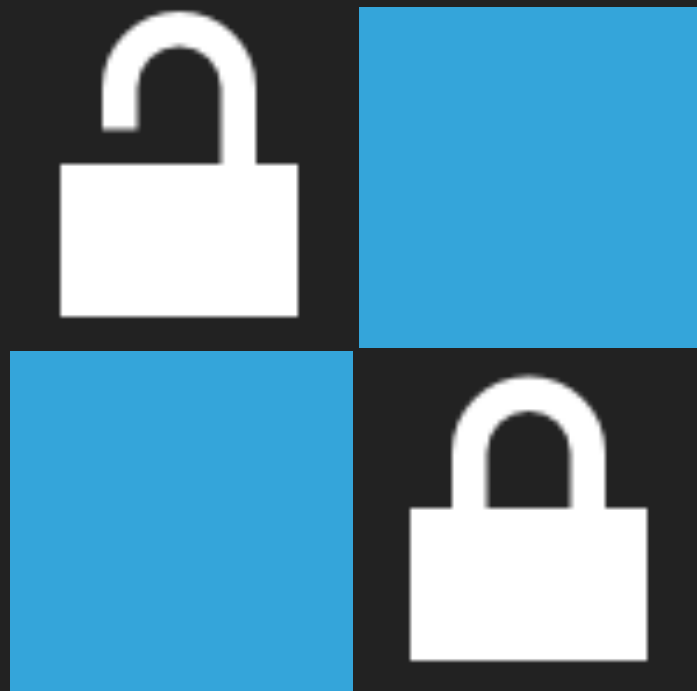


128 bit key

***** ➡ 

- ▶ Key derivation functions (KDF) convert passwords to keys
- ▶ For good (21+ chars) passwords use HKDF ([RFC5869](#))
- ▶ Else: use a KDF with brute force protection (*)
 - ▶ SCRYPT ([RFC7914](#))
 - ▶ PBKDF2 ([RFC2898](#))

(*) *Brute force protection*: The function is designed to be very slow (up to seconds). This prevents enumeration attacks.



PATTERNS

**KEY DERIVATION 2:
FROM 1 TO N**