



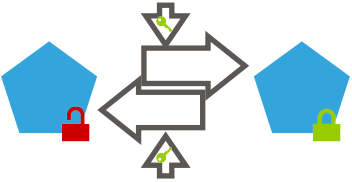
JENNER

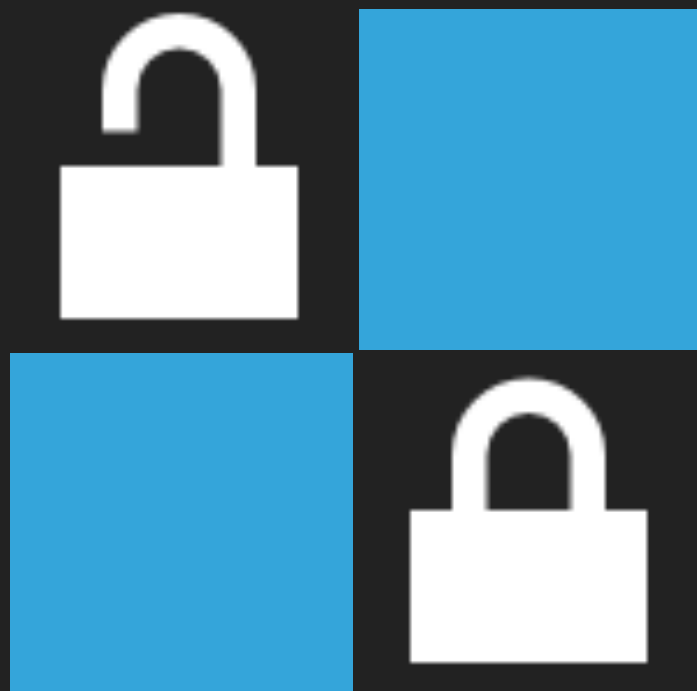


SOLUTIONS FOR SECURING KEY(S)



Master key in different storage	E.g. records in DB, master key on filesystem.	Baseline. Easy. Protects (only) against DB theft (e.g. SQL injection)
Encrypt master key	Use baked in 'obfuscation key' to encrypt master key. Better: Store master key in OS keyring.	Easy. Some protection against FS access (e.g. remote file inclusion)
Derive per-record key	Unique per record key derived from master key. <i>Bonus: Protect integrity. Bind to record.</i>	Mostly easy. Protects against some cipher text attacks. Use AEAD!
Crypto Host	All crypto operations on a dedicated host. (Master)key never leaves Crypto Host.	Depends on architecture. Helps w. key distribution. Makes key theft difficult.
HSM	Use Hardware Security Module as Crypto Host.	Expensive & difficult. "Crypto Host on steroids".

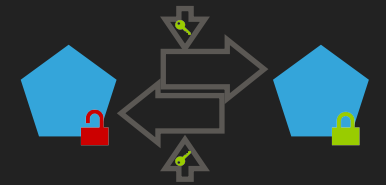




PATTERNS

**KEY DERIVATION 1:
PASSWORD TO KEY**

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