







JENNER

User

Salary

Checksum\*

Alice

0xabcd...

Eve

0x9876...

...

...

...

**2,718€**

3,141€



SLEEPER WHEN CENTERED

**DATA INTEGRITY & ASSOCIATION**

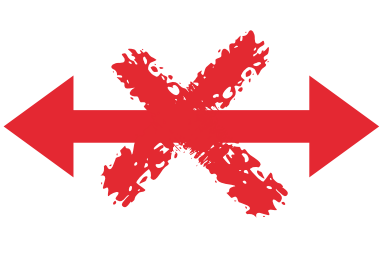








THE CHECKSUMS DON'T MATCH, PROMOTION IS DECLINED



**0X123456...**



**Problem:** Protected data can be “replayed”.

**Solution:** Cryptographically bind data to context.

\*including the user name in the hash/hmac

0xabcd...







## DATA INTEGRITY & ASSOCIATION

0X123456... ✓

**Problem:** Protected data can be “replayed”.

**Solution:** Cryptographically bind data to context.

User	Salary	Checksum*
 Alice	3,141€	0xabcd...
 Eve	3,141€	0xabcd...

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# DATA INTEGRITY & ASSOCIATION

0X123456... ✓

**Problem:** Protected data can be “replayed”.

**Solution:** Cryptographically bind data to context.

User	Password Hash *	...
 Alice	0X123456...	...
 Eve	0XABCDEF...	...
...	...	...

\* including the username in the hash/hmac