

# Should You Use Probabilistic or Deterministic Salesforce Encryption?

In Salesforce, you have the option to encrypt certain fields with either probabilistic or deterministic encryption. Before we get to the pros and cons of each, here's some background on Salesforce data encryption.



## Why Encrypt Your Salesforce Data?

At rest encryption is an essential component of cybersecurity which ensures that stored data does not become an easy target for hackers. Data at rest refers to data residing in computer storage in any digital form, like the data you store in Salesforce.

## What is Salesforce Shield Platform Encryption?

With Platform Encryption, part of Salesforce Shield, you can natively encrypt sensitive data at rest, so your company can confidently comply with privacy policies, regulatory requirements, and contractual obligations for handling private data—including PII, ePHI, PCI, and more.



## But should you use probabilistic or deterministic encryption?

### Probabilistic

Uses randomness in algorithm, turning the same text into different ciphertexts

**Pros:**  
Extremely secure

**Cons:**  
Can create issues when logic is executed in database, or when encrypted values are compared to a string (or each other). Filtering not possible because data is turned into random, patternless strings

**The bottom line:** If you don't need to filter your data, use probabilistic encryption.

### Deterministic

Uses a static initialization vector (IV) so encrypted data is matched to a field value. IV is unique and can only be decrypted with org-specific encryption key

**Pros:**  
Allows filtering of encrypted data while ensuring a given plaintext value doesn't universally result in the same cipher text value across all fields, objects, or orgs. Lets you specify for both case-sensitive and case-insensitive record values

**Cons:**  
Can create issues if two inputs are identical

**The bottom line:** Use deterministic encryption to secure org data and still be able to filter it.

## Want to learn more?

Request a free Guided Shield Assessment today to see the encryption status of all your fields in real time.