



AWS S3

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S3 encryption

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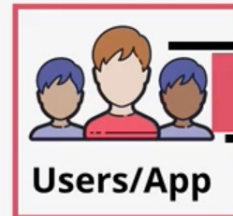
- Encryption áp dụng ở mức độ object, không phải bucket
- Trong 1 bucket, mỗi object có thể được encrypt theo 1 kiểu khác nhau
- Có 2 kiểu encryption: Client side và Server side

**Keys
Process
Tooling**

- **Client**-Side Encryption

- **Server**-Side Encryption

In-Transit



S3 Endpoint

S3 Storage



Users/App

S3 Endpoint

S3 Storage

S3 client side encryption



Client side encryption



- Client (app) thực hiện encrypt data rồi mới gửi lên S3
- Key dùng để encrypt: KMS / client's own key
- Tham khảo:
<https://docs.aws.amazon.com/AmazonS3/latest/userguide/UsingClientSideEncryption.html>

S3 server side encryption (S3 – SSE)

S3 - SSE



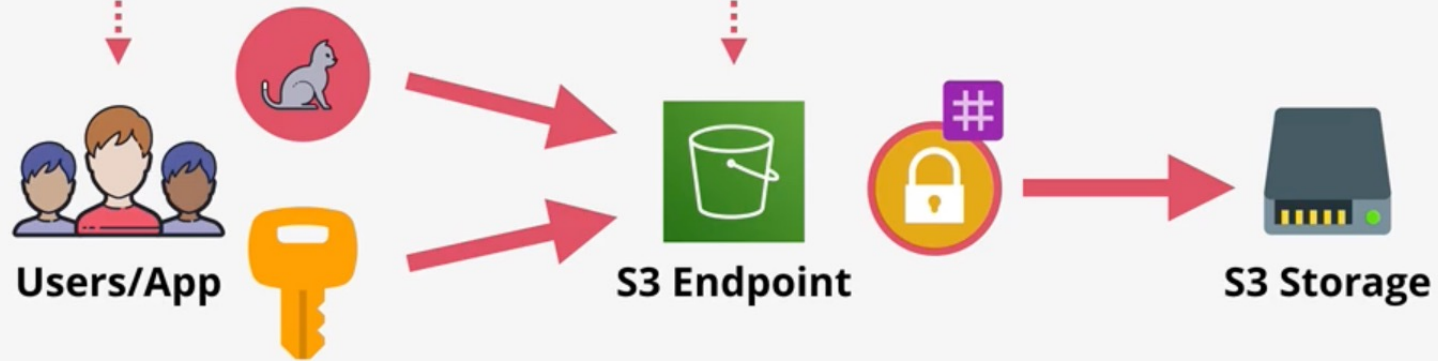
Sự khác nhau đến từ đối tượng cung cấp key.

- SSE with Customer – Provided Keys (SSE – C) key nhà trồng
- SSE with S3 - Managed Keys (SSE – S3) key aws trồng + ta k quản lý đc
- SSE with Customer Master Keys (CMK) Stored in AWS KMS (SSE – KMS)
nông sản nhà trồng, gửi nhờ aws bảo quản + ta quản lý được

SSE - C

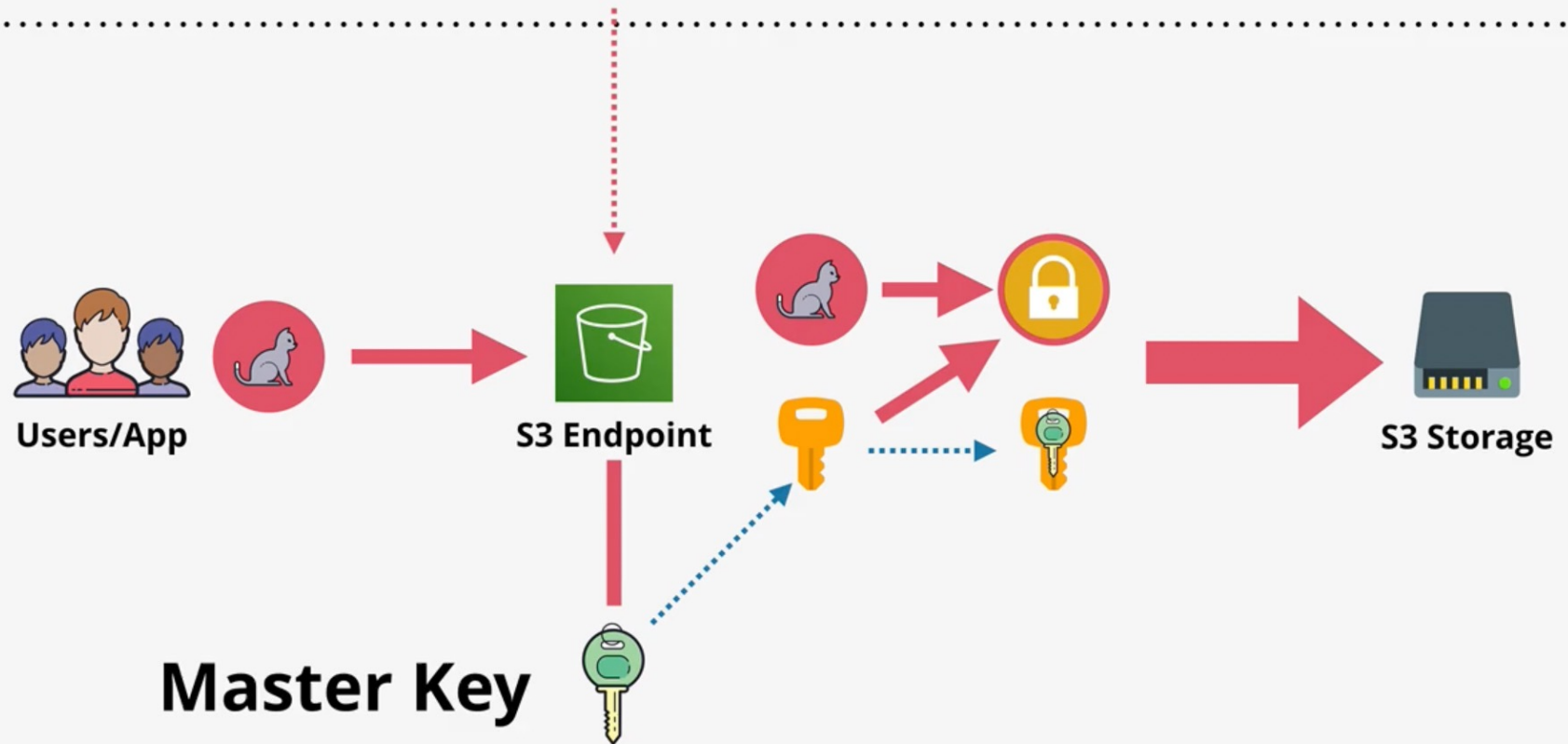
**Manages
Keys**

**Manages
Encryption**

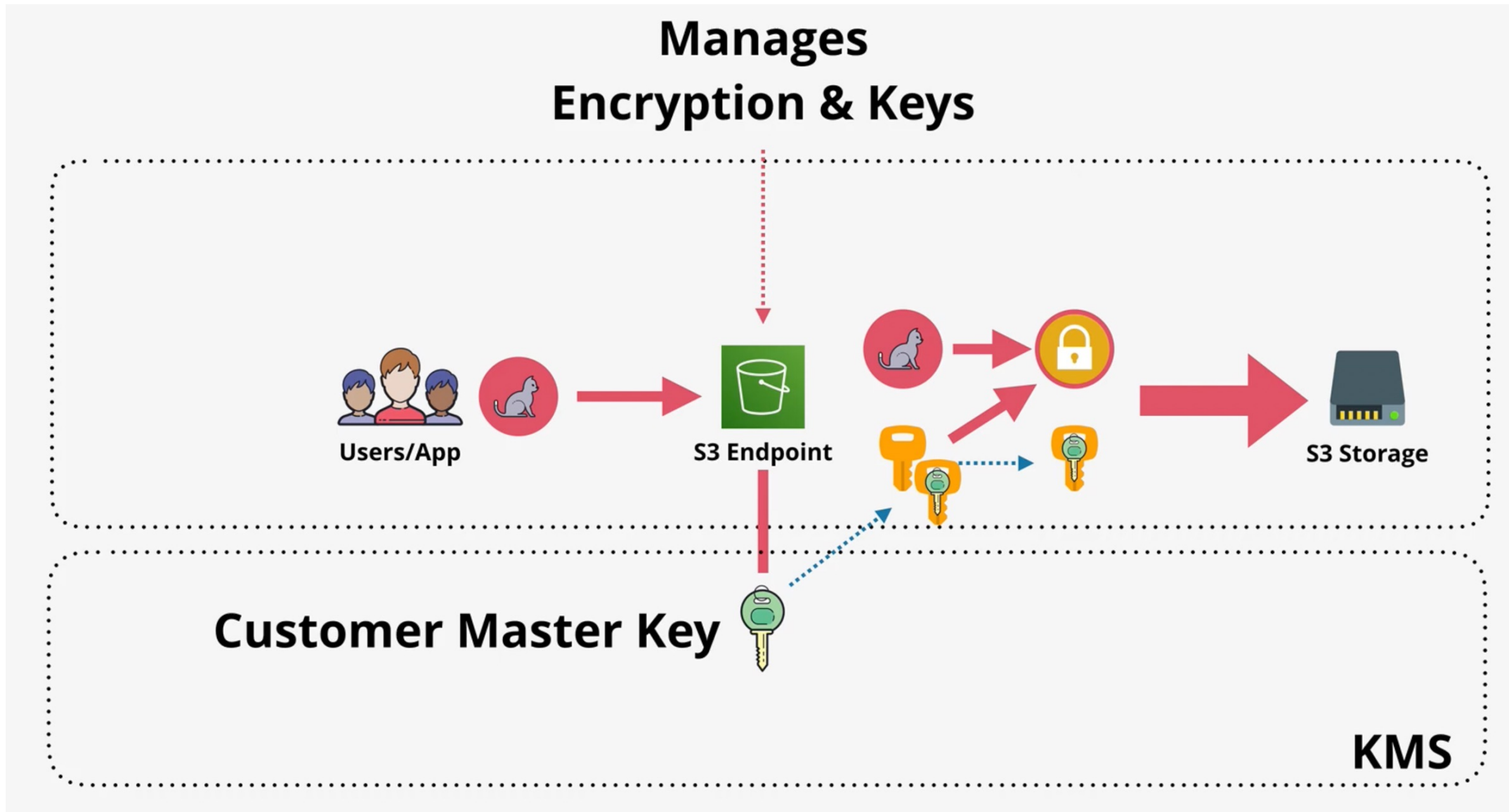


SSE – S3

Manages Encryption & Keys



SSE - KMS



So sánh



Method	Key Management	Encryption Processing	Extras
Client-Side	YOU	YOU	
SSE-C	YOU	S3	
SSE-S3	S3	S3	
SSE-KMS	S3 & KMS	S3	Rotation Control Role Separation