

# Triple-DES 密碼系統



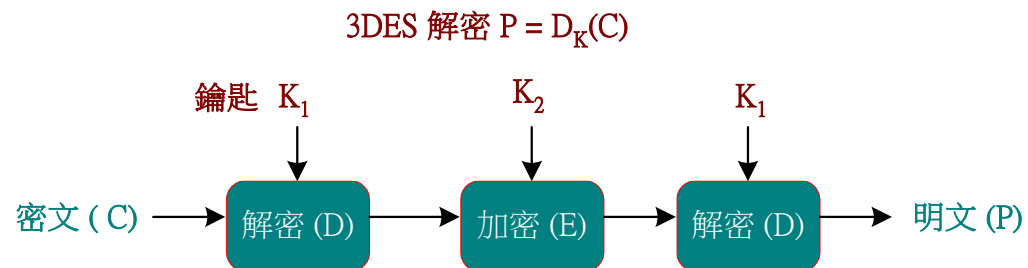
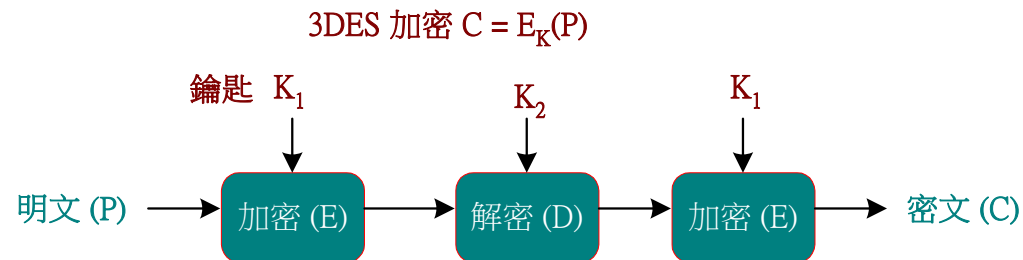
## ✦ Two-Keys 3DES

2 把鑰匙：56 bits \* 2

◆ 加密： $C = E_{K_1}[D_{K_2}[E_{K_1}[P]]]$

◆ 解密： $P = D_{K_1}[E_{K_2}[D_{K_1}[C]]]$

◆ 鑰匙： $K = K_1 \parallel K_2$  (排列組合)



# Three-keys 3DES



✿ 3 把鑰匙：56 bits \*3

◆ 加密： $C = E_{K_3}[D_{K_2}[E_{K_1}[P]]]$

◆ 解密： $P = D_{K_1}[E_{K_2}[D_{K_3}[C]]]$

◆ 鑰匙： $K = K_1 \parallel K_2 \parallel K_3$

