

Generated on December 19, 2023

Summary

Notes	Screenshots	Bookmarks
= 0	6	Т О

Key Distribution Center (KDC)



- · Shared Master Keys do not scale easily
- Each communication pair needs to share a key



Key Distribution Center (KDC) solves the scalability problem of sharing master keys in secure communication.

▷ 0:24

• K_A, K_B are master keys shared with KDC, K_s is a session key





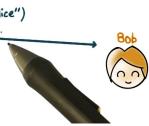
▷ 1:09

Key Distribution Center (KDC)

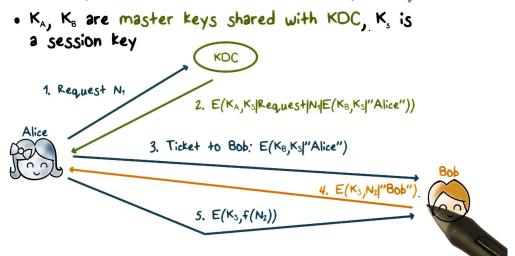
• K_A, K_B are master keys shared with KDC, K_s is a session key



3. Ticket to Bob: E(KB,Ks|"Alice")



Alice sends a ticket to Bob encrypted with the master key shared between them and the KDC.



Bob and Alice securely communicate using a session key created by KDC.

▷ 2:58

Key Distribution Center (KDC)

** Ka, Ka are master keys shared with KDC, Ka is a session key

1. Request N1

2. E(Ka,Ka|Request|N1|E(Ka,Ka|"Alice"))

Alice

3. Ticket to Bob: E(Ka,Ka|"Alice")

5. E(Ka,F(N2))

Alice sends an encrypted message to Bob to prove her identity in their communication.

▷ 3:36

• K_A, K₈ are master keys shared with KDC, K_s is a session key

