

A
 k_{AB}

$chall_A \xleftarrow{\$} \{0,1\}^\lambda$

$\xrightarrow{chall_A}$

$\xleftarrow{chall_B, res_B}$

$\xrightarrow{res_A}$

B
 k_{AB}

$chall_B \xleftarrow{\$} \{0,1\}^\lambda$
 $res_B \leftarrow \text{HMAC}_{k_{AB}}(chall_A)$

$res_A \leftarrow \text{HMAC}_{k_{AB}}(chall_B)$
verify if
 $res_B = \text{HMAC}_{k_{AB}}(chall_A)$

verify if
 $res_A = \text{HMAC}_{k_{AB}}(chall_B)$