

	Signature	PKE, Revised PKE	Pre-Shared Key
$prf_I$	$\text{PRF}_k(g^x, g^y, \text{cky}_I, \text{cky}_R, \overrightarrow{SA}, ID_I)$		
$prf_R$	$\text{PRF}_k(g^y, g^x, \text{cky}_R, \text{cky}_I, \overrightarrow{SA}, ID_R)$		
$\sigma_X$	$\text{Sign}(sk_X, prf_X)$	-	-
$c_5$	$\text{Enc}(k_2; ID_I, cert_I, \sigma_I)$	$\text{Enc}(k_2; prf_I)$	$\text{Enc}(k_2; ID_I, prf_I)$
$c_6$	$\text{Enc}(k_2; ID_R, cert_R, \sigma_R)$	$\text{Enc}(k_2; prf_R)$	$\text{Enc}(k_2; ID_R, prf_R)$