

Prover (Client role)

Verifier (Server role)

Shared information : cipher suite, *ProverId*, *VerifierId*, and *Context*

Prover 'key pair' (w_0 , w_1) derived from password

Registration record (w_0 , L) derived from password

`psa_pake_setup()` with key (w_0 , w_1)
`psa_pake_set_role(PSA_PAKE_ROLE_CLIENT)`
`psa_pake_set_user(ProverId)`
`psa_pake_set_peer(VerifierId)`
`psa_pake_set_context(Context)`

Generate key share X

`psa_pake_output()` for $shareP = X$

($shareP$)

`psa_pake_setup()` with key (w_0 , L) or key (w_0 , w_1)
`psa_pake_set_role(PSA_PAKE_ROLE_SERVER)`
`psa_pake_set_user(VerifierId)`
`psa_pake_set_peer(ProverId)`
`psa_pake_set_context(Context)`

Validate $shareP$

`psa_pake_input()` for $shareP$

Generate key share Y
Compute K_{shared} ,
 $confirmP'$ and $confirmV$

`psa_pake_output()` for $shareV = Y$ and $confirmV$

($shareV$, $confirmV$)

Validate $shareV$

`psa_pake_input()` for $shareV$

Compute K_{shared} ,
 $confirmP$ and $confirmV'$

`psa_pake_output()` for $confirmP$

($confirmP$)

Verify that
 $confirmV' = confirmV$

`psa_pake_input()` for $confirmV$

`psa_pake_get_shared_key()` to extract K_{shared}

Verify that
 $confirmP' = confirmP$

`psa_pake_input()` for $confirmP$

`psa_pake_get_shared_key()` to extract K_{shared}