$1a.Client \rightarrow PM$ : Authentication Request

2a.PM $\rightarrow$ PAL : Invoke PAL with "Authentication Block"

 $2b.PM \rightarrow PAL$  : sealedPassList

 $3a.Client \leftrightarrow PAL$ : Execute Secure Tunnel Protocol

3b.Client : Store PALpub

 $\begin{array}{ll} 3c.Client {\rightarrow} PAL & : User \ ID \ and \ Password \ (master \ or \ OTP[n]) \\ 4a.PAL & : \ PassList = \ TPMUnSeal(sealedPassList, PCR18) \\ 4b.PAL & : \ validate \ User \ ID \ and \ Password \ from \ PassList \\ \end{array}$ 

4c.PAL : If (valid) TPMExtend("1",PCR18) else TPMExtend("0",PCR18)

 $\begin{array}{ll} \text{5a.PAL} {\rightarrow} \text{PM} & : \text{Validation Result (fail or success)} \\ \text{6a.PM} & : \text{Execute Attestation Protocol} \end{array}$ 

6b.PM $\rightarrow$ Client : If validation = "fail", send error and abort