A trace has been found.

Abbreviations
~M_4 = pk(skAlice)
~M_5 = sign(ccatH(H(id_to_bitstring(uidx_1)),H(id_to_bitstring(uidN))),skMan_2)
~M_6 = H(id_to_bitstring(uidN))
~M_7 = uidx_1
~M_8 = pk(skSoC_2)
~M_9 = pk(skMan_2)
~M = pk(skAlice)
~M_1 = pk(skMan_2)
~M_10 = pk(skMan_2)
~M_11 = salt_1
~M_12 = H(id_to_bitstring(salt_1))
~M_13 = sign(ccatH(H(id_to_bitstring(uidx_1)),H(id_to_bitstring(salt_1))),skAlice)
~X_1 = (~M_1,~M_11,H(id_to_bitstring(~M_11)),~M_13) = (pk(skMan_2),salt_1,H(id_to_bitstring(salt_1)), sign(ccatH(H(id_to_bitstring(uidx_1)),H(id_to_bitstring(salt_1))),skAlice))
~M_16 = pk(skSoC_2)
~M_17 = sign(sign(ccatH(H(id_to_bitstring(uidx_1)), H(id_to_bitstring(salt_1))),skAlice),skMan_2)
~M_18 = pk(skAlice)
~M_19 = H(id_to_bitstring(salt_1))
~X_2 = (~M_8,~M_15,~M,H(id_to_bitstring(~M_11))) = (pk(skSoC_2),sign(sign(ccatH(H(id_to_bitstring(uidx_1)), H(id_to_bitstring(salt_1))),skAlice),skMan_2), pk(skAlice),H(id_to_bitstring(salt_1)))