Abbreviations
~M_3 = exp(g,Y_1)
~M_4 = encxor((a_1,(id(pk(sk_3),exp(g,ltdh_1)),(edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,Y_1)),stone,hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,ltdh_1)),stwo,(id(pk(sk_3),exp(g,ltdh_1)),(hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),(exp(g,ltdh_1),a_2))),hash_length),a_2))),edhoc_kdf(hkdfextract(hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),(a_1,(~M,(id(pk(sk_3),exp(g,ltdh_1)),(edhoc_kdf(hkdfextract(hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),stzero,hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),plaintext_length))
~M_5 = a_1
~X_1 = aeadenc((id(a_9,a_10),(a_11,a_12)),a_13,edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,~M_6)),stone,hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,~M_7)),sthree,hash((wrap(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),((a_1,(~M,(edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,~M_6)),stone,hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,~M_7)),stwo,(~M,(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),(~M_2,a_2))),hash_length),a_2))),~M_2))),key_length),edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,~M_6)),stone,hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,~M_7)),sfour,hash((wrap(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),((a_1,(~M,(edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,~M_6)),stone,hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,~M_7)),stwo,(~M,(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),(~M_2,a_2))),hash_length),a_2))),~M_2))),iv_length)) = aeadenc((id(a_9,a_10),(a_11,a_12)),a_13,edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,Y_1)),stone,hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,ltdh_1)),sthree,hash((wrap(hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),((a_1,(~M,(edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,~M_6)),stone,hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,~M_7)),stwo,(~M,(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),(~M_2,a_2))),hash_length),a_2))),~M_2))),key_length),edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,Y_1)),stone,hash((wrap(exp(g,Y_1)),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,ltdh_1)),sfour,hash((wrap(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),((a_1,(~M,(edhoc_kdf(hkdfextract(edhoc_kdf(hkdfextract(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),exp(a_6,~M_6)),stone,hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),hash_length),exp(a_6,~M_7)),stwo,(~M,(hash((wrap(~M_3),wrap(hash((wrap(method_one),(wrap(a_5),(wrap(a_6),(wrap(a_7),a_8)))))))),(~M_2,a_2))),hash_length),a_2))),~M_2))),iv_length))

A trace has been found.