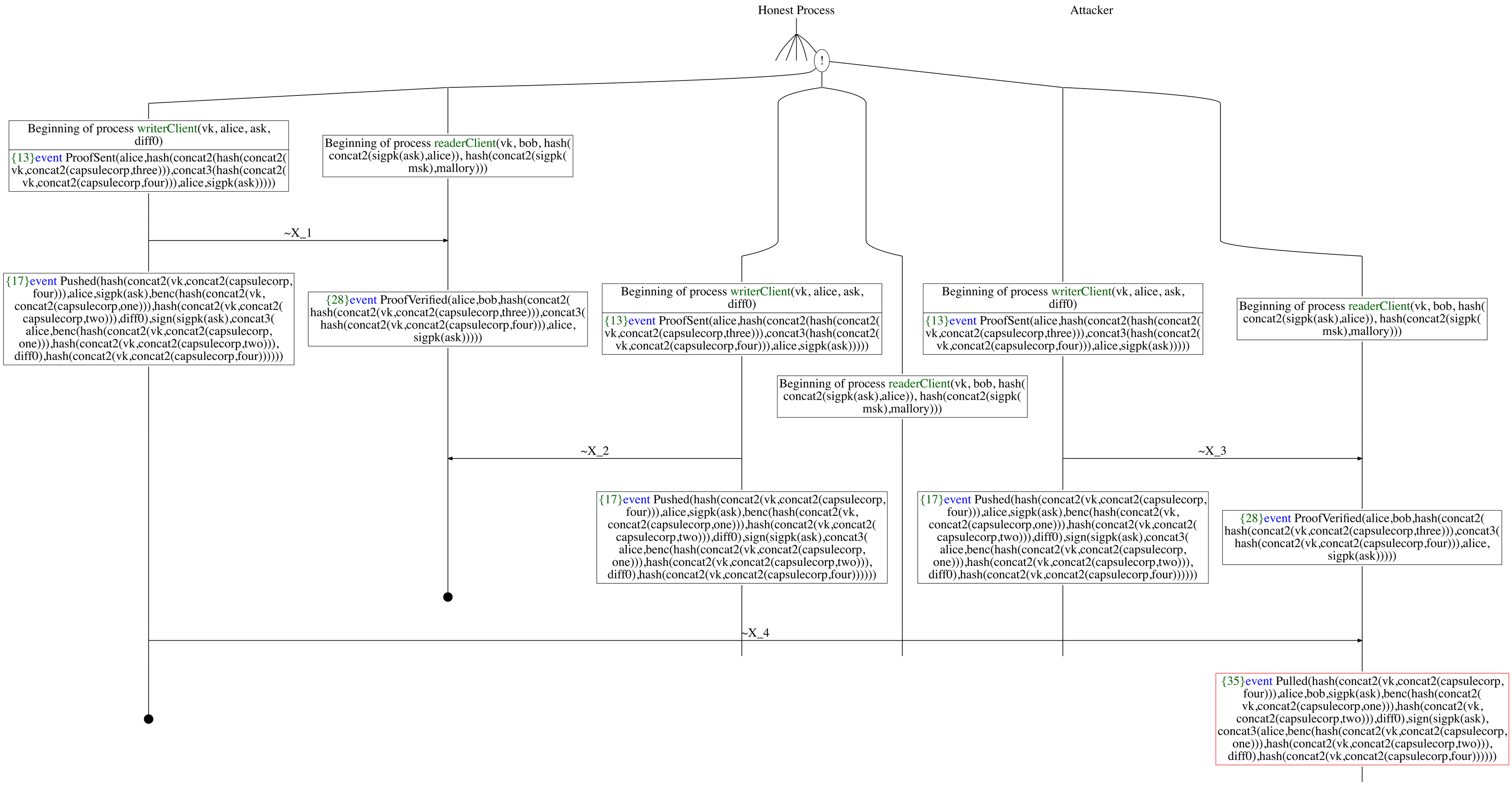
A trace has been found.

Abbreviations
~X_1 = (hash(concat2(vk,concat2(capsulecorp,four))),alice,sigpk(ask),hash(concat2(hash(concat2(vk,concat2(capsulecorp,three))),concat3(hash(concat2(vk,concat2(capsulecorp,four))),alice,sigpk(ask)))))
~X_2 = (hash(concat2(vk,concat2(capsulecorp,four))),alice,sigpk(ask),hash(concat2(hash(concat2(vk,concat2(capsulecorp,three))),concat3(hash(concat2(vk,concat2(capsulecorp,four))),alice,sigpk(ask)))))
~X_3 = (hash(concat2(vk,concat2(capsulecorp,four))),alice,sigpk(ask),hash(concat2(hash(concat2(vk,concat2(capsulecorp,three))),concat3(hash(concat2(vk,concat2(capsulecorp,four))),alice,sigpk(ask)))))
~X_4 = (hash(concat2(vk,concat2(capsulecorp,four))),alice,sigpk(ask),benc(hash(concat2(vk,concat2(capsulecorp,one))),hash(concat2(vk,concat2(capsulecorp,two))),diff0),sign(sigpk(ask),concat3(alice,benc(hash(concat2(vk,concat2(capsulecorp,one))),hash(concat2(vk,concat2(capsulecorp,two))),diff0),hash(concat2(vk,concat2(capsulecorp,four))))))