Supply chain attack

Company X is a software house offering a module M. Customers of X download the new version of M from the website of X. M offers a remote access to the network node running it provided that the user requesting the access is properly authenticated. The authentication is managed M itself that has a list L(M) of (user, password) pairs. The list is created when M is installed.

The ICT infrastructure of X is very weak so an APT has attacked it and now it can change as it likes the code of M. In particular, the APT wants to insert a backdoor into M so that it can have a remote access to the infrastructure of any customer that downloads M from the website of X and installs it.

Challenge: help APT to insert a backdoor into M so that even a review of L(M) cannot discover it