Abstract

The mobile agents' technology has been shown efficient to diverse computer networks applications due to its autonomy and capacity of adaptation. However, it also brings significant security concerns. The protection of Mobile agents is one of the most difficult problems in the area of mobile agents' security. There is not a single, comprehensive solution that provides complete protection of agents against malicious hosts. The protection of mobile agents is considered as one of the greatest challenges of security, because the platform of execution has access to all the components of the mobile agent. In this paper, we present a new architecture paradigm of mobile agents, which allows the separation of the implementation tasks of the agent and its security mechanisms. Our approach is based on using two strategies of adaptation to adapt the mobile agent security at runtime, depending on the sensitivity of the services required to perform the duties of the agent and the degree of confidence of the visited platforms.

Index Terms

Computer Science

Security
Keywords
Mobile agent  Security  Cryptography  Software components  Static adaptation
Dynamic adaptation