

# Access Control for Mobile Agent Systems

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## Abstract

Mobile agent is a combination of code and data, migrating one target computer to another. Moreover, it interacts with load computer or other mobile agent that is in the same computer. For example, mobile agent gets a new data baggage after the interaction. Mobile agent is attracting widespread interest due to its advantages, for example, flexible maintenance, tolerant to network and asynchronous execution. Some remarkable and potential uses are E-commerce, personal assistance, secure brokering and monitoring and notification. Security issue is a fundamental factor for widely deployed it.

Previous work on security issues has focused on protecting computer from malicious mobile agent and protecting mobile agent's code from malicious computer. However, there are still needs for defending mobile agent's data. Since access control is a useful security mechanism, so using access control to protect mobile agent's data is possible. The aim of this work is to present an interesting solution of access control for protecting mobile agent's data.

Partition number, role-based access control and discretionary access control are used. Finally our design is implemented based on Java Agent Development Framework (JADE). Overall, the aim of efficient and effective access control for protecting mobile agent's data baggage is achieved.

Keywords

Mobile Agent, Data Baggage, Access Control, JADE, Medium, Group Member, Group Owner