

A Secure Integrated Model for Mobile Agent Migration (SIMMAM)

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Abstract

Migration of an agent involves various security problems especially in heterogeneous environment. Most of the reviewed studies for securing the mobile agent depended on one security technique. The proposed model integrates well known security techniques in four security levels: securing Mobile Agent Using Agent Factory & Blueprint, securing Mobile Agent Blueprint, securing Mobile Agent Migration Path, and securing Host. The proposed model applies a variety of security techniques including generating the blueprint of the mobile agent by the host agent factory, encrypting the generated blueprint with the digital envelope and digital signature techniques, and securing the migration path with an algorithm that will detect any malicious manipulation to the agent itself or the migration path. These stated security techniques enabled the mobile agent to travel across the heterogeneous environment and complete the migration path securely and successfully. This model will increase the security and decrease the malicious manipulation of Host, mobile agent, and the migration path.

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