Mobile Agents are softwares migrating from one node to another to fulfill the task of its owner. In Static mobile agents, agent travels on the predefined path whereas in Dynamic mobile agents, agent route is decided by the host or the agent itself, which makes security much more difficult in it. Mobile agents are not properly utilized because of security concerns. Security
becomes more challenging in Dynamic mobile agents as compared to Static mobile agent. One such challenge is ‘Denial of Service’, in it the malicious host may deny resources required by the agent and kill the agent, thus the result computed so far is lost and this may happen every time the agent visits any malicious host. Colored Petri Nets (CPNs) is a language for the modeling and validation of systems in which concurrency, synchronization and communication play a major role. In our previous paper we have simulated and obtained the results for static mobile agent but in real world agents are dynamic. This paper simulates dynamic mobile agent model that enables the owner of the agent to detect the malicious host. The simulation has been done using CPNs, the result clearly proves that owner can detect the malicious hosts and thus prevent Denial of service attack to occur in future

Reference

- CPN Tools website: www.daimi.au.dk/CPNtools
- Dong Chun Lee and Jeom Goo Kim. Adaptive migration strategy for mobile agents on i
- Stefan Dobrev, Paola Flocchini, Giuseppe Prencipe, and Nicola Santoro. Mobile search
Simulation of Dynamic Mobile Agent Model to Prevent Denial of Service Attack using CPNS


Index Terms

Computer Science
Network Security

Key words
Dynamic mobile agent
of service attack
colored petrinets
independent and dependent mobile agent