A Policy Propagation Model using Mobile Agents in Large-scale Distributed Network Environments

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Abstract. With the growing number of attacks on network infrastructures, we need better techniques to detect and prevent these attacks. Each security system in the distributed network requires different security rules to protect from these attacks efficiently. So the propagation of security rules is needed. Therefore, we introduce mobile agents that propagate security rules by constantly moving around the Internet as a solution to propagation of security rules. This paper describes a new approach for propagation of security rules in large-scale networks, in which mobile agent mechanisms are used. To evaluate the proposed approach, we simulated a policy propagation model using a NS-2 (Network Simulator). Our new approach presents advantages in terms of spreading rules rapidly and increasing scalability.