



**RESEARCH ARTICLE**

## **Security Refinement in Nymble System**

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*Abstract— Anonymity in computer networks empowers users to access internet services anonymously and prevents any tracking or tracing of their identity on the World Wide Web. Many open source applications like Tor provide such anonymity. Traffic analysis and network surveillance are prevented by such type of networks. This facilitates hidden services to users and cover up internet protocol address of anonymous users. Many users take advantage of anonymity and use it for abusive purpose and remain hidden after misbehaving. As a result of this, website administrators block all well-known exit nodes of anonymous network and prevent misbehaved users as well as behaved users from accessing the website. To address this issue we present a Nymble system in which servers can blacklist misbehaving users by preserving user's anonymity.*

**Key Terms:** - *anonymity preservation; blacklist; pseudonymity; unlinkability*

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