





















Basic DoS	Any	Med	RR
Replaying and blocking Binding Updates	MN	Low	BCE lifetime, seq. number MAC
BCE lifetime, seq. number MAC	Any	High	RR
Return-to-home flooding	Any	High	RR
Inducing unnecessary binding updates	MN,CN	Med	Heuristic
Forcing non-optimized Routing	MN	Low	Heuristic
Reflection and Amplification	N/A	Med	BU design

## 12. Conclusion and Future Work

Mobile IP provides network mobility solution over the internet. This paper's study focus on the security aspect in mobile IP and provides a lot of suggestions and methods to improve security in mobile IP. In this report we firstly described wireless network security threats and security technology, we also investigated mobile security threats and different security solutions that can be applied to Mobile IP with emphasis on IPSec to provide the security solution for Mobile IP. Mobility feature and IPSec were not built on IPv4 protocol; they were designed as an extension to IPv4 standard. Mobile IP was an extension of the IPv4 standard under the name "Mobile IPv4" to support mobility. IPSec manages connections and can guarantee both encryption and data integrity through protocols of Authentication Header (AH), Encapsulated Security Payload (ESP) and Internet Key Exchange (IKE). The powerful way to secure mobile IP is by combining it with IPSec protocol; even though there are some limitations such as, IPSec does not stop traffic analysis and it use strong authentication for machines, not users. These limitations can be studied in future work. IPSec is not the only protocol that deal with securing mobile IP, there are several security protocols such as AAA protocol (Authentication, Authorization and Accounting) and Public Key Infrastructure protocol that provide strong management. With a combination of these protocols with IPSec, we get more security and protection for mobile IP. IPv6 was developed because the number of possible address entries in IPv4 is limited. In mobile IPv6, IPSec is a mandatory feature that is required to provide data security and services for communication in IPv6 network. The main difference between Mobile IPv4 and Mobile IPv6 is that Mobile IPv6 is not an add-on feature of IPv6, it is built into the base of IPv6 which makes it more efficient and easier to implement. Mobile IPv6 introduces different security threats that continue to get attention and should be studied in future work.

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