Abstract

This research presents the development of an Improved Intrusion Detection Secured RObus
t Header Compression (IDSROHC) technique for handling brute force attack. The Secured RObus
t Header Compression (Secured ROHC) was developed to secure internet protocol
version six (IPv6) packets against false initial refresh attack by encrypting the cyclic redundancy
check field. However, the CRC is only 3-8 bits long, which implies that a malicious node could
still attempt a brute force approach, where it sends fake packets with all possible CRC
combinations. An IDSROHC was developed using a modified selective watchdog intrusion
detection algorithm. A MATLAB graphical user interface was design to aid presentation.
IDSROHC was validated with Secured ROHC using throughput and packet delivery success.
The results of this work show that IDSROHC produced 4.97% improvement in throughput and
29% improvement in packet delivery success over Secured ROHC.

References


**Index Terms**

Computer Science  
Information Sciences

**Keywords**

IDSROHC, Secured ROH,Brute force-Attack, Throughput, Packet delivery Success