

## Detecting and Thwarting Interest Flooding Attack in Information Centric Network

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**Abstract :** Data Networking was brought forth as an instantiation of information-centric networking. The attackers can send a colossal number of spoofs to take hold of the Pending Interest Table (PIT) named an Interest Flooding attack (IFA) since the interests are recorded in the PITs of the intermediate routers until they receive corresponding Data Packets are go beyond the time limit. These attacks can be detrimental to network performance. PIT expiration rate or the Interest satisfaction rate, which cannot differentiate the IFA from attacks, is the criterion Traditional IFA detection techniques are concerned with. Threshold values can casually affect Threshold-based traditional methods. This article proposes an accurate IFA detection mechanism based on a Multiple Feature-based Extreme Learning Machine (MF-ELM). Accuracy of the attack detection can be increased by presenting the entropy of Internet names, Interest satisfaction rate and PIT usage as features extracted in the MF-ELM classifier. Furthermore, we deploy a queue-based hostile Interest prefix mitigation mechanism. The inference of this real-time test bed is that the mechanism can help the network to resist IFA with higher accuracy and efficiency.

**Keywords :** information-centric network, pending interest table, interest flooding attack, MF-ELM classifier, queue-based mitigation strategy

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