

Abstract: DDoS Attack Defense Mechanism using Traffic Deflecting Method in Autonomous System

Ho-Seok Kang and *Sung-Ryul Kim
Division of Internet and Media Engineering, Konkuk University
120 Neungdong-ro, Gwangjin-gu, Seoul 143-701, Republic of Korea
+82-2-446-4071
hsriver@gmail.com, kimsr@konkuk.ac.kr
**Corresponding Author*

Abstract

DDoS (Distributed Denial of Service) attacks remain a major problem for the Internet. Although defense systems are getting more advanced, a remaining key issue is where to place the defense system. A previous work called the Shield, brought up the deployment problem and handles the issue with traffic trapping and traffic black-holing techniques. In this paper, a framework for redirection and filtering that works within an AS (Autonomous System) is proposed, while the Shield works outside an AS. This system allows precise traffic redirection and detection using routing update of RIP, a widely-used IGP (Interior Gateway Protocol). Furthermore, by providing three-phase modes of operation, the framework is designed so that the AS can respond to DDoS attacks in a systematic way.

Acknowledgement

This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korea government(MEST) (2011-0029923).