

STUDIES OF PROMINENT DoS ATTACKS IN THE INTERNET: THEIR CAUSES, PREVENTIONS AND CASE STUDIES

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ABSTRACT

A denial-of-service attack (DoS attack) or distributed denial-of-service attack (DDoS attack) which has become a major concern in cyber security now, can be seen as a trial to make a computer or network resource unavailable or occupied so that its intended users can not use it. In DoS attacks, the attackers usually aim at interrupting Internet services that are being availed by legitimate users. For this purpose, the networks and the victim systems are targeted and flooded in such a way that movement of legitimate traffic across the system becomes almost impossible. The increased traffic causes consumption of incoming bandwidth as well as outgoing bandwidth. In many of these attacks, the victim machines are completely clogged and saturated resulting in those systems crashing as well as clogging and overloading the servers. Usually DoS attacks involve important or widely used websites and web services. In this paper we will be discussing the various types of DoS attacks on the Internet taking into account some case studies and simple means of preventing such attacks.

KEYWORDS: Denial of Service, Attacks, Simulation, Emulation, Testbeds, TCP, Denial of Service Attacks, Low-Rate TCP-Targeted Attacks