Abstract

Distributed Denial of Service attacks pose a serious threat to the online applications like banking, trade, and e-commerce which are dependent on availability of Internet. Defending Internet from these attacks has become the need of the hour for sustainable development of any economy. Most of the research work in this area focuses on developing defense against
these attacks without considering its practical deployment on the Internet. They evaluate the
defense through simulation or experimenting in controlled environments. However a sincere
thought is required to deploy these defense mechanisms in an incrementally acceptable way on
the Internet. In this paper, the focus is on deployment aspect of defense system against DDoS
attacks. The DDoS defense system in general is anatomized and need for distributed defense
as compared to centralized defense has been highlighted. All possible defense locations on the
Internet are critically analyzed for suitability of DDoS defense system deployment. A review of
existing distributed defense schemes in terms of deployment is also carried out. Based on
Internet structure, its working, and desired DDoS defense characteristics, ISP domain is chosen
for deployment. However extending cooperation among ISPs and secure framework for
communication among ISPs remain future concerns of our work.

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Deployment of Distributed Defense against DDoS Attacks in ISP Domain


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Index Terms

Computer Science  
Network Security
Key words

DDoS  Centralized defense  Distributed Defense Deployment

Detection

Response