Abstract

Countering distributed denial of service (DDoS) attacks is becoming ever more challenging with the vast resources and techniques increasingly available to attackers. Derived from the low layers, new application-layer-based DDoS attacks utilizing legitimate HTTP requests to overwhelm victim resources are more undetectable. The case may be more serious when such attacks mimic or occur during the flash crowd event of a popular Website. The problem
Enhanced Attack Resistance Scheme for App-DDoS Attacks using Bayes Optimal Filter Strategy

Concerned in this project is sophisticated attacks that are protocol compliant, non-intrusive, and utilize legitimate application-layer requests to overwhelm system resources. It characterizes application-layer resource attacks as either request flooding, asymmetric, or repeated one-shot, on the basis of the application workload parameters that they exploit. The traffic characteristics of low layers are not enough to distinguish the App-DDoS attacks from the normal flash crowd event. In this paper, the proposal work presents Gaussian distribution factor to enhance the attack resistance scheme for having better detection rate even for stationary object in the application DDoS attacks. The attack detection is identified with the Gaussian distribution of the traffic data of flash crowds surrounding the respective web sites. In this paper, the proposed mechanisms used to thwart the application DDoS attacks using bayes optimal filter strategy. The simulation using Network Simulator results proves that the attack resistance rate and delay is minimized and hence the proposed scheme outperforms the existing scheme.

References

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Index Terms

Computer Science  Hpc Applications

Keywords

Application Ddos Attacks  Bayes Optimal Filter Strategy  Gaussian Distribution