Shielding techniques for Application Layer DDoS Attack in Wireless Networks : A Methodological Review

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Abstract

In today's world the wireless networks are widely preferred as a communication medium as these are infrastructure less networks. The application layer of these networks is targeted by attackers because it is responsible for actual data exchange with privacy of end users. As human dependency on wireless networks is increasing the DDoS attacks i.e. distributed denial of service attack which becomes a nightmare for the researchers. This attack is one of the most devastating attacks that can be executed on web-servers and congest the network keys like socket connections, CPU cycles, and memory database. In this current mobile computing world, the necessity of DDOS attack management is significantly increased because this attack can degrade the entire web experience. Further, this DDOS attack is commenced along with the legitimate requests so it is also important to differentiate DDoS attack from other similar Events. This review endeavors to explore with more emphasis on various privacy preservation scheme for application layer DDoS attack and its management stages like prevention, detection, mitigation and Differentiation along with comparative statement of prominent techniques discovered in each stage. This methodological survey report shall lead the way to researchers and network designers to suit the specific management scheme to provide the complete protection of wireless networks from DDoS attack.

Full Text

Due to technical limitations, full-text HTML conversion of this manuscript could not be completed. However, the manuscript can be downloaded and accessed as a PDF.

Figures

Figure 1

Figure 2

Botnet

Figure 3

country wise distribution of botnet servers Q1 2019 [13]

Figure 4

DDoS Defence in Application Layer

Figure 5

Different Stages of DDoS Protection