Exploring Opportunities to Defeat DDoS Attack using Cloud

Mr. Pradeep Nayak[1], Anand M Rastapur[2], Amruth P S[3], Abhishek S V[4], Shashank S[5]
Assistant Professor, Department of Information Science and Engineering[1]
Students, Department of Information Science and Engineering[2,3,4]
Alva's Institute of Engineering and Technology, Mijar, Mangalore, Karnataka, India

Abstract: *DDoS attacks area unit rampant in cloud environments and frequently evolve into a lot of subtle and intelligent modalities, such as low-rate DDoS attacks. however in the meantime, the cloud setting is additionally developing in constant. currently instrumentation technology and microservice design area unit wide applied in cloud setting and compose container- based cloud setting. Examination with traditional cloud environments, the container-based cloud setting is a lot of light-weight in virtualization and a lot of versatile in scaling service. Naturally, a matter that arises is whether or not these new options of container-based cloud setting can bring new possibilities to defeat DDoS attacks. during this paper, we have a tendency to establish a mathematical model supported queueing theory to research the strengths and weaknesses of the container-based cloud setting in defeating low-rate DDoS attack. supported this, we have a tendency to propose a dynamic DDoS mitigation strategy, which might dynamically regulate the amount of instrumentation instances serving for various users and coordinate the resource allocation for these instances to maximise the standard of service. And intensive simulations and testbed-based experiments demonstrate our strategy will build the restricted system resources be used sufficiently to keep up the standard of service acceptable and defeat DDoS attack effectively within the container-based cloud setting..*

Keywords: Container, microservice, DDoS attack, mitigation, cloud computing

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